

A Code of Practice for Canadian Kennel Operations

Third edition | 2018



CANADIAN VETERINARY
MEDICAL ASSOCIATION

L'ASSOCIATION CANADIENNE
DES MÉDECINS VÉTÉRINAIRES

Acknowledgements

The third edition of this Code took seven years to complete. The Canadian Veterinary Medical Association (CVMA) expresses sincere appreciation to Amy Morris of the BC SPCA for her research, coordination, and drafting support, Dr. Sherlyn Spooner and Dr. Colleen Marion for their significant contributions to the Code's development, and Dr. Warren Skippon and Dr. Shane Renwick for their leadership.

The CVMA also wishes to express gratitude to the small animal subcommittee members who provided drafting, feedback, and guidance over the seven-year period: Dr. Patricia Turner, Dr. Carol Morgan, Dr. Alice Crook, Dr. Tim Zaharchuk, Dr. Jim Berry, Dr. Michelle Lem, Ms. Barb Cartwright, Dr. Michelle Groleau, Dr. Tim Arthur, Ms. Christine Archer, Dr. Chris Bell, Dr. Doug Whiteside, Dr. Michael Cockram, Dr. Patricia Alderson, Dr. Trevor Lawson, Dr. Gilly Griffin, and Dr. Marilyn Keaney.

The CVMA thanks the following organizations and their representatives who were consulted to review the Code and provide comments before publication: provincial veterinary associations and regulatory licensing bodies, Canadian veterinary colleges, the American Veterinary Medical Association, the Canadian Federation of Humane Societies, Agriculture and Agri-Food Canada, the Canadian Kennel Club, the Pet Industry Joint Advisory Council of Canada, the National Companion Animal Coalition, and the Registered Veterinary Technologists and Technicians of Canada.

Preface

Since the release of the Code of Practice for Canadian Kennel Operations second edition in 2007, both our society and science have advanced with respect to the humane treatment of dogs. Over the past 10 years, new scientific information has become available on dog behaviour, housing, end of life issues, transport, nutrition, euthanasia, and general dog welfare. This third edition of the Code of Practice for Canadian Kennel Operations (“the Kennel Code”) reflects both the new science and our evolving relationship with dogs.

The Kennel Code has been updated to mirror the changing values towards animals that have emerged over the past decade. Dogs are now recognized by the public and by some legislative bodies as sentient beings that have the capacity to feel, perceive, and experience. This recognition has influenced the way people interact with dogs and the standard of care expected to be provided for them, whether a dog’s role is that of family member, working dog, or a dog kept for breeding and show.

This document is the combined work of many dedicated professionals who gave freely and generously of their time and knowledge.

Mahatma Gandhi said, “The greatness of a nation and its moral progress can be judged by the way its animals are treated.” The CVMA Animal Welfare Committee anticipates that Canada will be viewed as a great nation, in part, for the contribution provided by this progressive document.

Table of Contents

Acknowledgements	i
Preface.....	ii
References.....	vi
Glossary.....	vii
List of Acronyms	x
Introduction	1
Section 1. Animal Environment (Housing and Handling Facilities)	3
1.1 Facility.....	3
1.1.1 Construction.....	3
1.1.2 Temperature.....	4
1.1.3 Roofs.....	4
1.1.4 Ceilings.....	5
1.1.5 Floors	5
1.1.6 Ventilation.....	6
1.1.7 Humidity.....	6
1.1.8 Light.....	7
1.1.9 Noise	7
1.2 Enclosures and Activity Areas	8
1.2.1 General Housing Principles	8
1.2.2 Primary Outdoor Enclosure	10
1.2.3 Isolation Area	11
1.2.4 Whelping Area	12
1.3 Sanitation.....	13
1.4 Waste Disposal.....	15
1.5 Nuisance Wildlife Control.....	15
1.6 Building Safety and Emergencies.....	16
Section 2. Food and Water.....	18
2.1 Food	18
2.1.1 Feeding Guidelines.....	18
2.1.2 Regulations and Guidelines Governing Commercial Pet Food	19
2.1.3 Homemade Diets and Raw Food.....	19
Homemade Diets	19
Raw Food Diets.....	20
2.1.4 Additions to Diets	20
2.2 Water.....	21



Section 3. Animal Well-being	23
3.1 Principles of Health Management.....	23
3.1.1 Monitoring.....	24
3.1.2 Record keeping and Identification	25
3.1.3 Health Care	27
Parasites and Infectious Diseases.....	27
Ticks	28
Intestinal Parasites	28
Heartworm (<i>Dirofilaria immitis</i>)	29
Lungworm.....	29
Parvovirus.....	30
Dermatophytes (Ringworm)	30
3.1.4 Vaccinations.....	32
3.2 Caregiver Training and Duties.....	33
3.3 Behaviour, Socialization, Training, and Enrichment	35
3.3.1 Behaviour	35
3.3.2 Socialization.....	35
3.3.3 Training.....	36
3.3.4 Enrichment.....	37
Section 4. Husbandry Practices	40
4.1 Responsible Breeding	40
4.1.1 Genetics, Conformation, and Temperament.....	40
Genetics	40
Conformation	41
Temperament and Breed Traits	42
4.1.2 Soundness	43
Reproductive History.....	44
Physical Examination.....	45
Reproductive Career.....	45
Infectious Diseases that Affect Soundness.....	46
4.2 Handling, Restraint, and Grooming.....	47
4.3 Puppy and Dog Placement	48
4.4 Considerations for Working Dogs	51
4.5 Aging and Retirement	53
Housing Considerations for Aging Dogs.....	53
Feeding Considerations for Aging Dogs.....	54
Health Issues of Aging Dogs.....	54
Section 5. Transport	56



Section 6. End of Life Considerations and Euthanasia..... 60
6.1 End of Life Considerations..... 60
6.2 Euthanasia..... 60
6.3 Disposition of Remains..... 61

Bibliography 64
Appendix A. Resting Energy Requirements..... 68
Appendix B. Body Condition 70
Appendix C. Five Freedoms 71
Appendix D. Summary of Requirements 72



References

The following information sources were used as key resources throughout the Kennel Code and when used they are generally not directly referenced. They were deemed by the authors to be sound and reliable sources of information for incorporation into the Kennel Code as they come from well-respected legislative and regulatory bodies in jurisdictions external to Canada. Where a direct reference is not provided, standards within the Code originate from the following reference documents:

- Australian Capital Territory. (2010). Animal welfare (Welfare of dogs in the ACT) code of practice 2010. Retrieved from: <http://www.legislation.act.gov.au/di/2010-85/current/pdf/2010-85.pdf> Last accessed February 19, 2018.
- City of Gold Coast. (2009). Code of practice: For the keeping and breeding of cats and dogs. Retrieved from: <http://www.goldcoast.qld.gov.au/documents/bf/breeder-code-practice.pdf> Last accessed February 19, 2018.
- Ireland. (2010). Dog breeding establishments act. Retrieved from: <http://www.irishstatutebook.ie/eli/2010/act/29/enacted/en/pdf> Last accessed February 19, 2018.
- New South Wales. (2009). Animal welfare code of practice breeding dogs and cats. Retrieved from: http://www.dpi.nsw.gov.au/_data/assets/pdf_file/0004/299803/Breeding-dogs-and-cats-code-of-practice.pdf Last accessed February 19, 2018.
- New Zealand. (2010). Animal welfare (dogs) code of welfare 2010. Retrieved from: <https://www.mpi.govt.nz/document-vault/1428> Last accessed February 19, 2018.
- Tasmania. (2012). Animal welfare guideline: Breeding dogs. Retrieved from: [http://www.dpiw.tas.gov.au/inter,nsf/Attachments/LBUN-8SM6EG/\\$FILE/Animal%20Welfare%20Guideline_Breeding%20Dogs..pdf](http://www.dpiw.tas.gov.au/inter,nsf/Attachments/LBUN-8SM6EG/$FILE/Animal%20Welfare%20Guideline_Breeding%20Dogs..pdf) Last accessed February 19, 2018.
- United States. (1966). Animal welfare act of 1966, P.L. 89-544. Retrieved from: http://www.aphis.usda.gov/animal_welfare/downloads/awa/awa.pdf Last accessed February 19, 2018.
- Victoria. (2002). Code of practice for the operation of breeding and rearing establishments. Retrieved from: <http://www.dpi.vic.gov.au/pets/aboutpets/legislation-and-regulation/domestic-animal-businesses/operation-ofbreeding-establishments> Last accessed February 19, 2018.

Glossary

Term	Definition
Aggression	Vocal or physical behaviour that is intended to be threatening and can result in physical injury.
Behaviour	The action, reaction, or functioning of an animal in various circumstances.
Breed	A group of animals within a species having common ancestors and certain distinguishing characteristics, usually developed by deliberate selection. In Canada, breeds are officially recognized under the authority of the Animal Pedigree Act.
Breeder	A person who raises dogs, primarily for breeding purposes.
Canine	Any animal of the family Canidae.
Caregiver	A person who is involved in the direct care and handling of (dogs).
Castrate	Surgically remove testicles from a male dog (also “neuter”).
Clean (noun)	Free from contaminants or disease-causing agents.
Clean (verb)	Removal of physical and microbiological contaminants such as dirt, grime, feces, and stains using physical methods and washing with an appropriate detergent solution.
Communicable	Able to be transmitted from a person or animal to another person or animal.
Conditioning	A form of behavioural training in which a response becomes more frequent or more predictable in a given environment as a result of reinforcement that is usually provided as a stimulus or reward for a desired response.
Conformation	The form, structure, and physical arrangement of body parts in accordance with breed standards.
Counter-conditioning	Replacing an unwanted behaviour or response to a stimulus with a wanted behaviour or response by the association of positive actions with the stimulus.
Crossbred	A dog whose sire and dam are of two different breeds, whereas a purebred is from two parents of the same breed.
Dam	The female dog of a mating pair before or after breeding. The mother of a puppy or litter of puppies.
Desensitization	Behaviour modification technique that gradually (always remaining below the threshold to induce fear) exposes a dog to a fear-inducing stimulus until the stimulus no longer elicits a fear response.
Disinfect	Killing microorganisms left on a surface after cleaning by using an appropriate disinfectant.
Dog	Technically refers to a male dog, but is commonly used as the generic term to refer to canines of both sexes.

Enclosure	A structure created by natural or artificial barriers to contain one or more dogs to an area where they will eat, exercise, rest, and sleep, including, but not limited to a doghouse, room, run, or cage.
Enrichment	A process for improving the environment and behavioural care of dogs within the context of their behavioural needs.
Estrus	The restricted period of time during which the female is sexually receptive; commonly referred to as being “in heat.”
Euthanasia	The act of inducing the humane death of a dog.
Gait	A sequence of leg movements (as a walk or run) by which a dog moves forward.
Heat	Denotes when a dam is sexually receptive and can be bred. In most dams the heat cycle lasts for three weeks and occurs about every six months.
Humane	Actions that promote good welfare and minimize suffering.
Hyperactivity	A behaviour pattern frequently characterized in dogs by pacing, barking, and destructive chewing.
Inbreeding	The mating of very closely related dogs, those within their immediate family. Example: father to daughter.
Intact	A dog that has not been altered by neutering.
Kennel	A facility in which dogs are bred, trained, or boarded.
Lethargy	Behaviour displayed as excessive quietness, absence of play in puppies, extended sleep periods, and/or lack of interest at feeding. It can be a sign of illness.
Line breeding	The mating of dogs of the same breed to relatives, except for those in their immediate family, e.g., the mating of ancestors, such as a dog to his dam’s mother.
Matted	Fur tangled in a thick mass.
Mature	A fully grown adult dog, generally considered to be two years or older.
Neuter	Surgically alter a male or female dog so that it is no longer capable of reproduction (castrate or spay).
Nuisance wildlife	Any wild animals, including insects and other invertebrates, which are perceived to be in conflict with humans, their animals, or property.
Outcross	The mating of unrelated animals within a breed.
Pathogen	Agent that causes infection or disease, including a bacterium, virus, fungus, or protozoan.
Pedigree	A written record of a dog’s descent: a family tree that may be registered. For registration purposes the requirement is generally a three-generation pedigree, and up to a five-generation pedigree for a newly recognized breed.
Personnel	All individuals working at the kennel, including caregivers.

Plasticity	A change in animal behaviour that results from exposure to stimuli, such as changing environmental conditions.
Potable water	Water that is safe to drink without risk of health problems.
Primary enclosure	An enclosure wherein a dog spends the majority of time in any 24 hour period.
Puppy	A dog less than 12 months of age.
Purebred	A dog whose sire and dam represent the same breed and are themselves of unmixed descent. For officially recognized breeds, an animal may only be represented for sale as purebred if it conforms to the definition in the by-laws of the association authorized to register animals of that breed.
Sanitation	The combination of cleaning and disinfecting.
Sire	The father of a puppy or litter.
Socialization	The process of controlled, positive exposure of an animal to their own species, other animals, people, and novel stimuli. Essential for normal behavioural development.
Soundness	Describes a dog that is mentally and physically healthy, in good condition, and without anatomical defects that impair vital functions. For purebred dogs, soundness includes the ability to successfully perform the tasks they are bred for.
Spay	To surgically remove the uterus and/or ovaries from a female dog. Also referred to as an ovariectomy if both uterus and ovaries are removed, or an ovariectomy if only ovaries are removed.
Stereotypical behaviour	An abnormal repetitive, invariant behaviour pattern with no obvious goal or function.
Stress	The physiological response to certain stimuli. In some circumstances, this can assist a dog to cope. The stress response can be associated with either positive emotions (e.g., excitement, arousal) or negative emotions (e.g., anxiety, frustration), depending upon the nature of the stimulus or the dog's perception of that stimulus.
Stud	A male dog used for breeding purposes.
Temperament	A dog's character, disposition, and tendencies: the behavioural characteristics of a dog that are relatively stable over time and across similar situations. A puppy's temperament can change as it matures.
Vector	An insect, tick, or other animal that can transmit disease.
Veterinarian-client-patient relationship	The existence of an immediate relationship between the veterinarian, their patient(s), and the owner. Veterinarians are required to have attended to the patient(s) in a prescribed reasonable period of time in order to give a diagnosis and recommend treatment for the specific dog or dogs.
Whelping	The process of a dam giving birth.
Zoonosis	A disease that can be transmitted between humans and animals.

List of Acronyms

Term	Definition
AAFCO	Association of American Feed Control Officials
AVMA	American Veterinary Medical Association
BCS	Body condition score
CCAC	Canadian Council on Animal Care
CFHS	Canadian Federation of Humane Societies
CFIA	Canadian Food Inspection Agency
CKC	Canadian Kennel Club
CVMA	Canadian Veterinary Medical Association
IATA	International Air Transport Association
NCAC	National Companion Animal Coalition
NRC	National Research Council
PIJAC	Pet Industry Joint Advisory Council of Canada
RER	Resting Energy Requirement
SPCA	Society for the Prevention of Cruelty to Animals
VCPR	Veterinarian-client-patient relationship





CANADIAN VETERINARY
MEDICAL ASSOCIATION
L'ASSOCIATION CANADIENNE
DES MÉDECINS VÉTÉRINAIRES

Canadian Veterinary Medical Association
Third Edition | 2018

Introduction

This is the third edition of A Code of Practice for Canadian Kennel Operations (Kennel Code), developed by the Small Animal Welfare Committee of the Canadian Veterinary Medical Association (CVMA). It will replace the second edition which was published in 2007. Extensive literature searches of both new scientific studies and existing standards worldwide provide the basis for this document. Many animal healthcare professionals and experts were consulted in order to provide the most accurate and up-to-date information. The Kennel Code was sent to animal welfare and animal care stakeholders for their comments and input. The final document was approved by the Animal Welfare Committee of the CVMA and the CVMA Executive Council. For those interested in further research, a bibliography is included at the end of the document.

This Kennel Code can apply to various kennel environments in which dogs are kept for breeding purposes ranging from a private home to a large breeding facility. Certain segments of this Kennel Code can also be applied to various environments in which dogs are housed, including long-term boarding facilities, short-term daycare facilities, municipal pounds, animal rescues, or animal shelters. In some cases, pre-existing documents may be a complementary or better-suited reference for standards of care in certain types of kennel environments, such as the *Canadian Standards of Care in Animal Shelters*.¹

The structure of this Kennel Code varies greatly from the previous one in order to align more closely with the National Farm Animal Care Council's (NFACC) Codes of Practice, which are nationally recognized codes for the care of animals used for food, fibre, and fur production. Like the NFACC codes, existing animal welfare or animal control legislation in each province will govern to what degree this Kennel Code is applicable and enforceable in each kennel environment. Where this Kennel Code is incorporated into local animal welfare or control legislation, the new structure can make enforcement more effective.

The Canadian Veterinary Medical Association (CVMA) is a national organization for veterinarians and not a legislative body.

This Kennel Code stresses the importance of the veterinarian-client-patient relationship (VCPR). Because veterinarians in Canada fall under provincial governance, the definition of the VCPR may vary from province to province. In all provinces and territories, the VCPR demonstrates the importance of a working connection and interaction between the veterinarian, their canine patient, and the dog's owner. Veterinarians are required to have attended to the patient in a prescribed reasonable period of time in order to give a diagnosis and recommend treatment for the specific dog. When a good VCPR exists, dogs are healthier, more dogs are successfully placed in permanent homes, and breeders gain a reputation for using the best breeding practices.

¹ <https://www.canadianveterinarians.net/documents/canadian-standards-of-care-in-animal-shelters>

Throughout this document, care has been taken to respect and incorporate the ethical concepts as stated in the “Five Freedoms of Animal Welfare.”

They are as follows:

- Freedom from hunger and thirst
- Freedom from discomfort
- Freedom from pain, injury, or disease
- Freedom to express normal behaviours
- Freedom from fear and distress

A more complete statement of these Five Freedoms can be found in Appendix C.

This Kennel Code is designed to assist breeders in successfully advancing the health and welfare of the dogs they breed. It is also to be used as a reference for kennel operators, including those who show dogs and have working dogs. It is intended as a resource for the public when researching the best breeders for their chosen dogs. It will allow prospective dog owners to ask pertinent questions to assess the knowledge of breeders with respect to animal care, as well as the health and behaviour traits of the dogs they keep to evaluate, in person, how dogs are cared for in a kennel operation, and to make an adequate assessment of whether they are ready to provide adequate care for the prospective dog.

An extensive table of contents is provided to make this document easy to navigate. The Kennel Code is written to be user-friendly by using common, rather than scientific, words when appropriate. A glossary is also included with definitions of medical and scientific words.

The contents of this Kennel Code will not be comprehensive for all circumstances. For example, ideal cage and pen size will depend upon the breed, age, facility layout, staff time for social activity, and enrichment offered. As well, an important aspect of ensuring the well-being of each dog is to pay attention to his or her uniqueness. For the Kennel Code to be fully effective, it is in the best interest of those involved in the care and handling of dogs and puppies to adapt their practices to meet the requirements and recommendations described in the Kennel Code.

Undoubtedly, as additional research information becomes available and management practices change, recommendations and requirements within this Kennel Code will also undergo change.

Section 1

Animal Environment (Housing and Handling Facilities)

1.1 Facility

Facilities have a direct impact on the health and well-being of the resident dogs. The layout and design will significantly affect the ease of managing and maintaining the kennel for many years.

When selecting a site for a new kennel, consider factors such as space needed for outdoor runs, sufficient drainage, access to utilities, and lighting. Local zoning restrictions, bylaws, building codes, and standards must be adhered to. Proximity to neighbours and the potential for noise-related complaints should also be considered when choosing the actual site. Advanced planning, discussion with other kennel operators and veterinarians, as well as visits to existing licensed kennels will assist with design concepts for a new kennel.

1.1.1 Construction¹

REQUIREMENTS

1. Construct interior walls and partitions of materials that are appropriately treated or coated to be rendered washable, sanitizable, impervious to moisture, smooth, and durable.
2. The facility meets local construction requirements including fire safety standards related to relevant local legislation.
3. Use only nontoxic materials in places in which dogs have direct contact.
4. Interior walls are in good condition, free of sharp edges or other potential causes of injury.
5. Walls and fences are sturdy, in good repair, and of sufficient height and small enough gaps to prevent escape.

RECOMMENDED PRACTICES

- a. Render doors, window frames, and window sashes constructed of wood impervious to moisture and resistant to entry by insects, birds, and animals that may be harmful to the buildings or dogs. Treated wood may be toxic to dogs.
- b. Store combustible materials such as paper, wood chips, etc., in a fire-resistant area.

¹ Select requirements may not apply to smaller breeding operations in private homes (e.g., some of the more stringent requirements for ceilings, floor drains, walls, and floors).

1.1.2 Temperature

Environmental temperature is managed by ventilation, sunlight, shade, appropriate insulation, and supplementary heating or cooling. Many breeds of dogs tolerate a range of ambient temperatures as long as they are dry, away from harmful drafts, have adequate bedding material, and have had time to adjust to the temperature. Consideration should be given to factors such as breed conformation, age, and overall health.

REQUIREMENTS

1. Maintain a temperature in the kennel that optimizes dog comfort.

RECOMMENDED PRACTICES

- a. Take into account breed conformation, coat length and density, age and activity level in relation to ambient weather conditions when adjusting environmental temperatures.
- b. Provide extremely old, young, brachycephalic, and infirm dogs with a warmer/cooler environment as required. This may include supplementation of local heat lamps, fans, or extra bedding.
- c. Avoid temperature fluctuations that may cause discomfort during extremes in weather.
- d. Provide a comfortable resting temperature; for most dogs this ranges from 10°C to 25°C.
- e. Provide an insulated reflective roof.
- f. Provide an insulated floor.

1.1.3 Roofs

REQUIREMENTS

1. Roof coverings fastened to sheathing or directly to the roof joists are laid so as to prevent the entrance of insects, birds, and animals that may be harmful to the buildings or dogs into the facility.
2. The roof is covered with suitable materials in order to eliminate leakage and exposure of dogs to adverse weather conditions.

RECOMMENDED PRACTICES

- a. Design roofs and ceilings to prevent major temperature variations.



1.1.4 Ceilings

REQUIREMENTS

1. Ceilings are constructed of impervious materials and subject to finishing comparable to those of the walls and partitions.
2. Ceilings, walls, and partitions abut tightly, preventing gaps which can lead to entry by insects, birds, and animals that may be harmful to the buildings or dogs.
3. Seal and treat corners of ceilings, walls, and partitions to render them completely washable and sanitizable.

1.1.5 Floors

Kennelled dogs are in constant contact with the enclosure floor. It is vital for dog comfort and foot health that the surface provides good traction, safe footing, is kept clean and dry, and is free of hazardous debris or construction. Constant contact with rough surfaces can lead to foot and skin trauma. A variety of surfaces in an enclosure will allow dogs to select the areas they prefer for sleeping, elimination, and play.

REQUIREMENTS

1. Ensure good foot health by constructing solid floors. Wire or slatted flooring is unacceptable. Ensure the floor supports the dog without sagging.
2. Construct floors of impervious materials, such as sealed concrete or other materials, which provides a smooth surface that is easy to clean and sanitize.
3. Floors are in good repair and with good traction to prevent slipping and injury.
4. Drain size is at least 10 cm.
5. Drain covers are used and designed to minimize the risk of dog injury.
6. Slope floors towards any drain(s) at a minimum pitch of 2.1 cm/m so that the dogs kept in the enclosure do not have continuous or extended contact with any part of the floor which is wet.

RECOMMENDED PRACTICES

- a. Make a raised platform or deep bedding available for the comfort of the dogs.
- b. Extend impervious coverings at least 15 cm up the walls.
- c. Ensure flooring allows for traction and stable footing in order to avoid a slip injury.
- d. Mold impervious coverings to prevent crevices or cracks.
- e. Seal and slope floors to allow for drainage within 5 minutes.
- f. Ideal drain size is 15 cm.

1.1.6 Ventilation

Proper air circulation is essential to the prevention of respiratory disease, maintaining suitable humidity levels, controlling odour, and maintaining a comfortable temperature. The number of air changes per hour is extremely important and is dependent on the number of dogs being housed relative to the size of the facility. A source of fresh air is critical. Recirculation of inside air spreads contaminants, viruses, bacteria, and moulds. Drafts, chilling, and excessively high humidity are detrimental to dogs of all ages and promote respiratory disease.

REQUIREMENTS

1. Ventilation and heating systems are constructed to supply fresh air and enable adequate exchange of air and maintenance of optimal environmental conditions for all seasons.
2. Provide additional ventilation by using exhaust fans and/or air conditioning when ambient temperatures reach more than 26°C.

1.1.7 Humidity

Adequate ventilation including use of air exchangers, dehumidifiers, humidifiers, and fans as appropriate will help control humidity.

Relative humidity levels less than 25% are associated with increased discomfort and drying of the mucous membranes and skin, which can lead to chapping and irritation. High humidity levels can result in condensation within the building structure and on interior or exterior surfaces with the subsequent development of moulds and fungi.² When combined with high temperature, high humidity can also increase the risk of heat distress.

REQUIREMENTS

1. Control indoor humidity levels to maintain animal comfort, minimize the risk of transmission of animal disease, prevent damage to the structural integrity of the building and its contents, and prevent accumulation of excess moisture that can promote growth of mould.

RECOMMENDED PRACTICES

- a. Maintain humidity between 35-50%.
- b. In the event that proper relative humidity levels cannot be maintained adequately, consult a heating and ventilation expert.

² A Report of the Federal-Provincial Advisory Committee on Environmental and Occupational Health, Technical Guide to the Investigation of Indoor Air Quality in Office Buildings, Department of National Health and Welfare, Cat. No. H46-2/93-166 Erev ISBN 0-662-23846-X Humidity and the Comfort Zone.

1.1.8 Light

REQUIREMENTS

1. Lighting is adequate so that all areas of the interior of the kennel can be clearly seen.
2. Minimum lighting is eight hours per day. Maximum lighting is comparable to the length of natural daylight hours.
3. At a minimum, dogs experience eight consecutive hours where minimal or no artificial lighting is used to ensure good quality rest.

RECOMMENDED PRACTICES

- a. Use sunlight to provide natural lighting and ensure dogs have adequate shaded areas not exposed to direct sunlight.

1.1.9 Noise

Manage noise from barking dogs to comply with local noise regulations and occupational health and safety requirements, taking into consideration a dog's natural instinct to communicate through vocalizing.

Barking is a form of interspecies or intraspecies communication and is part of normal social behaviour. Dogs are social creatures; therefore, their isolation from other dogs or humans can lead to behavioural problems such as repetitive barking. Kennel personnel should avoid encouraging undesirable barking behaviour by, for example, refraining from yelling or shouting. It is preferable that dogs be rewarded when they stop barking and engage in favourable behaviours such as sitting, lying down, or staying.

REQUIREMENTS

1. Use materials that optimize soundproofing when building or renovating a facility.
2. Maintain an environment in which the average sound level is less than 85 dB.

RECOMMENDED PRACTICES

Reducing the impact of noise caused by barking can be achieved by one or more of the following methods:

- a. Use soundproofing or suitable construction materials to reduce noise transmission, such as slow-closing doors, and quiet ventilation or heating systems.
- b. Take care with dog placement to avoid unnecessary arousal by humans, incompatible dogs, and female dogs in heat.
- c. Wherever practical, attempt to limit types of external visual stimulation that can lead to barking. Examples are cyclists, other dogs being exercised, and delivery persons.
- d. Place dogs in groups to promote calm behaviour and minimize barking.
- e. Train dogs to stop barking on command and desensitize dogs to noises that stimulate barking such as door bells and knocking.

1.2 Enclosures and Activity Areas

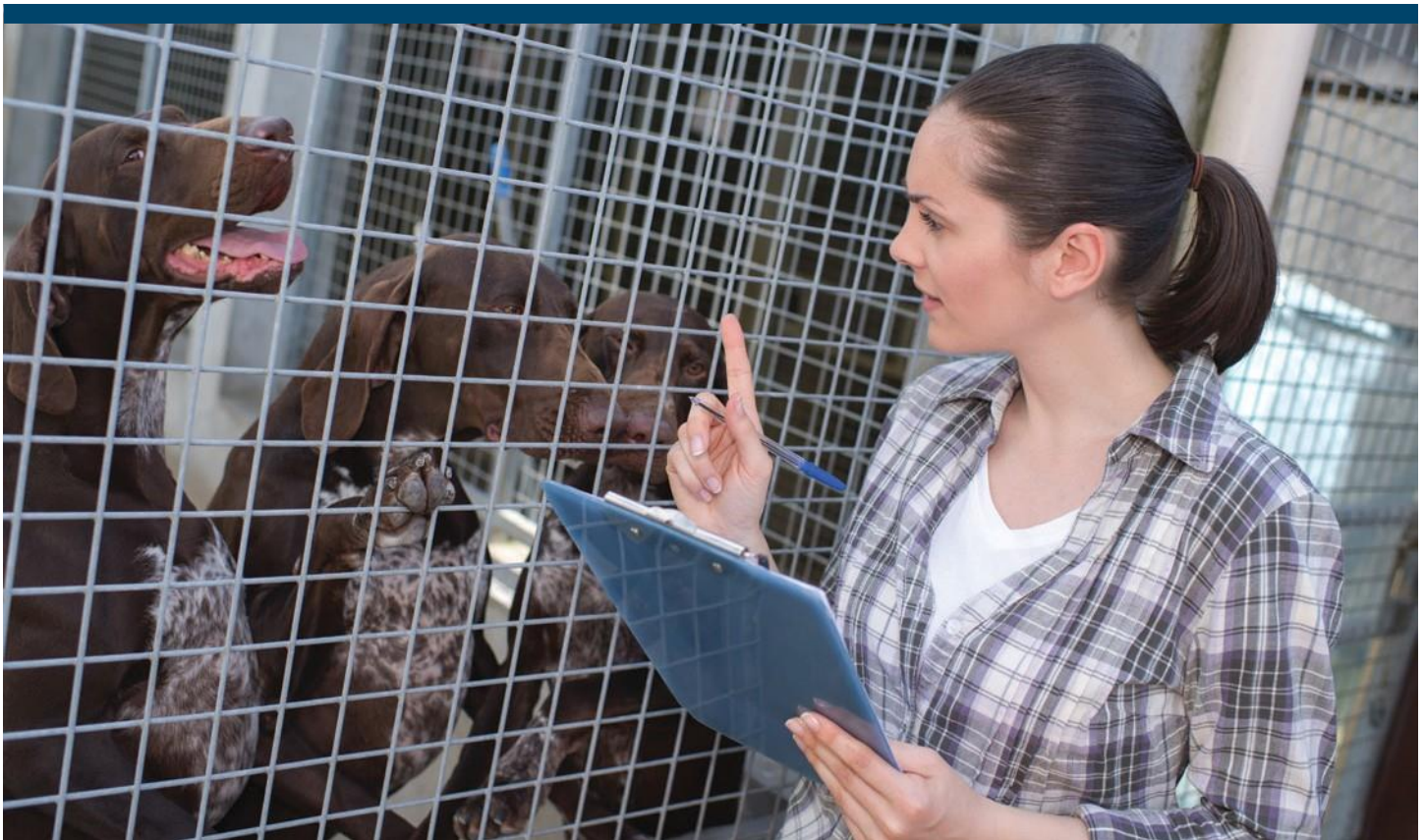
1.2.1 General Housing Principles

Optimal dog housing allows animals to exercise, socialize, and exhibit as many normal behaviours as possible. The provision of a safe environment that minimizes the risk of injury and stress contributes to overall well-being. Reducing risk of disease transmission will have a positive impact on overall animal health within the facility.

The primary enclosure and activity area may be combined into one space for each dog, or may be divided into sections depending on function. Regardless, the entire space the dog has access to must facilitate the dog's daily needs. These daily needs include eating, drinking, resting, elimination, exercising, socializing, and interacting with humans.

Exercise for dogs is of prime consideration. If no separate exercise areas are provided, pen sizes are adjusted to provide exercise space, and a daily exercise program is instituted (outdoors when weather permits).

The following requirements and recommendations apply to both indoor and outdoor housing designated as the dog's primary enclosure, including group housing.



REQUIREMENTS

1. Females in heat are not housed with non-neutered males.
2. Dogs exhibiting interdog aggression are not housed with incompatible dogs.
3. Puppies younger than 10 weeks old are housed in an enclosure with their dam separate from other dogs. Initial vaccines and deworming are completed before 10 weeks of age or as directed by a veterinarian to minimize the risk of disease transmission.
4. Any primary dog enclosure:
 - i. allows dogs to lie flat on their sides outside their bed in the sleeping area;
 - ii. allows dogs to move freely, which includes the ability to walk and turn around easily, move about easily for the purpose of postural adjustments including stretching, wagging their tails without touching the enclosure walls or ceiling, standing normally to their full height without touching the enclosure walls or ceiling, and lying down without touching another dog;
 - iii. provides a separate sleeping area for the dog that does not become damp and has sufficient clean, dry, and comfortable bedding for the dog appropriate to its size and coat;
 - iv. allows the dog to urinate and defecate away from their sleeping and eating areas;
 - v. prevents urine and feces from contaminating adjoining enclosures;
 - vi. has an area to place and secure food and water bowls to prevent bowls from becoming contaminated, spilling, and soiling enclosure contents, and allows animals to eat and drink freely;
 - vii. is free of any dangerous structure or object that may cause injury;
 - viii. contains enrichment strategies including toys, enabling species-appropriate contact that includes other dogs and humans, and appropriate exercise;
 - ix. is evaluated daily to ensure dogs sharing an enclosure or housed adjacent to each other are compatible; separate dogs that show behaviours towards each other that could result in injury, cause stress, or prevent access to food, bedding, or space resources;
 - x. has at least one side through which a caretaker can observe the dog and the dog can see the exterior;
 - xi. provides a distinct activity area large enough to allow dogs to exercise, and to socialize and play freely with other dogs or humans, allowing access to the outdoors when weather permits;
 - xii. provides a separate housing area where dogs can be moved while their enclosure is being cleaned; dogs are not returned to their primary enclosure until it is dry.
5. Tethering of dogs (i.e., chains or ropes used to tie the dog to an immovable object such as a stake or building) is not allowable as a method of confining a dog to a primary enclosure, nor as the only means of containment.
6. Any restraining device used for tethering allows the dog to move in a manner that is safe, prevents entanglement, and does not weigh more than 10% of the dog's body weight.

7. Minimum primary enclosure space requirements³

Height of the dog measured at the shoulder of the dog (cm)	Area (m ²)	Width (m)	Height (m)
70 or greater	15	2.40	1.80
40 to 70	10	1.80	1.80
20 to 40	6	1.40	1.20
5 to 20	4	1	1.20

Minimum primary enclosure space requirements apply to the keeping of one adult dog. Dams and their puppies up to eight weeks of age are provided with an additional space of 10% per puppy. If two or more adult dogs are kept in one enclosure, the minimum dimensions for the enclosure specified are increased by 1.5 m² for each dog kept in the enclosure.

RECOMMENDED PRACTICES

- a. Provide more space where possible.
- b. Provide a separate exercise area extending from the primary enclosure.
- c. If tethering, provide a restraining device that is at least five times the length of the dog nose to tail.
- d. Monitor dogs while they are tethered.

1.2.2 Primary Outdoor Enclosure

Outdoor enclosures can be provided as a primary means of containment for breeds suitable to the outdoors that are properly acclimatized to seasonal and regional temperatures.

The general housing principles section (1.2.1) and requirements applies to primary outdoor enclosures.

3 City of Gold Coast. (2009). Code of practice: For the keeping and breeding of cats and dogs. Retrieved from <http://www.goldcoast.qld.gov.au/documents/bf/breeder-code-practice.pdf>

REQUIREMENTS

1. Shelter and protection from the elements in both the primary enclosure and activity area, if separate, including protection from direct sunlight, wind, rain, sleet, snow, and extreme cold or hot temperatures.
2. A stand-alone shelter such as a dog house accessible to dogs at all times. This shelter consists of a solid roof and walls that are tall enough to allow the dog to stand fully upright, a doorway that is large enough for the dog to enter and exit comfortably, and a solid floor constructed in such a manner as to remain dry. The floor is large enough for the dog to turn around and lie down comfortably.
3. The shelter contains adequate bedding and insulation, such as straw, to keep the animals clean, dry, and warm.
4. Dogs unable to tolerate living outdoors have access to the indoors, including but not exclusive to those that are aged, ill, or injured.

RECOMMENDED PRACTICES

- a. Provide a shelter that is weatherproof and waterproof.
- b. Provide ventilation in a manner that prevents the accumulation of moisture and odours.
- c. Provide an entrance and hallway that are separate from the sleeping area.
- d. Attach a canvas or rubber flap at the entrance.
- e. Elevate the structure off the ground.
- f. Use feeding and water bowls that prevent spillage.

1.2.3 Isolation Area

The purpose of a designated isolation area and quarantine period is to reduce the spread of disease. An isolation area is designated for newly acquired dogs that may be incubating disease, and/or dogs receiving treatment for, or suspected of having, a communicable disease. The quarantine period for new arrivals is based on an established health and welfare plan. For disease-related incidents, it is of a duration deemed appropriate by the veterinarian. Humans are important carriers for some infectious diseases. Appropriate caution is crucial to ensure diseases are not transmitted to humans or from humans to other dogs.

REQUIREMENTS

1. An isolation area that is completely separate from the existing healthy dog population.
2. Newly acquired dogs and dogs suspected of, or receiving treatment for, a contagious disease are not housed in the same area simultaneously.
3. The isolation area minimizes the movement of air to other areas.
4. Sufficient space is always provided for the dog to lie down, eat, drink, and relieve themselves. The dog also has an appropriate area for movement and exercise as well as toys for enrichment, unless otherwise recommended by the veterinarian.
5. There is space in which personnel can perform daily duties, including providing medical treatments, cleaning, feeding, and social interaction.
6. Cleaning materials and equipment are designated solely for the isolation area and are inaccessible to the dog(s).
7. Food and water bowls are cleaned in the isolation area or sprayed and washed in a sink that is disinfected after use.
8. Appropriate disinfectants and sanitation protocols are used depending on disease conditions. Disinfectants are used in accordance with manufacturer's recommendations.
9. Personnel are adequately trained in quarantine protocols.
10. Sanitation and hygiene protocols are strictly applied to the isolation area, including all reusable bedding and clothing.
11. Waste material and disposable items are placed into garbage bags before being removed from the isolation area and are disposed of immediately.

RECOMMENDED PRACTICES

- a. A source of running hot and cold water is present in the isolation area.
- b. The operating procedures for the isolation area are posted prominently inside and outside of the area.
- c. The isolation area has a separate ventilation pathway.

1.2.4 Whelping Area

A whelping box is designed to protect puppies during birth and early life by keeping them safely contained, protected from cold, and safe from the danger of crushing or smothering by the mother. A whelping box is constructed with four sides and a floor. Within the box, dowelling rails may be used to help prevent the dam from pushing a puppy accidentally into the wall and suffocating it by lying on it. A whelping area consists of a whelping box and a separate area that allows the dam to have access to food, water, and the ability to rest and eliminate away from the puppies.

REQUIREMENTS

1. Provide adequate human supervision and access to human assistance during the whelping period and following the birth of the puppies.
2. The whelping box has a floor area two and a half times the size of the dam.
3. Absorbent bedding to keep the dam and puppies clean and dry.
4. Excrement is removed from whelping area at least twice daily, or more often as required to ensure good health and sanitation.
5. The whelping area allows the dam to have access to food, water, and the ability to rest and eliminate away from the puppies.
6. The water bowl is situated so that a puppy cannot fall into it.
7. The whelping box prevents puppies from escaping or harming themselves.
8. Until puppies are able to successfully thermoregulate, a supplemental source of safe heating is available.

RECOMMENDED PRACTICES

- a. Dowelling rails are placed along all four sides, 10 cm (4 inches) from the floor, and 10 cm (4 inches) out from the walls - forming a ledge. For toy breeds, the dowelling should be lowered by 5 cm (2 inches).
- b. Separate the whelping area from the individual and/or group enclosure housing other dogs, thus providing the whelping dam with privacy.
- c. Provide soft bedding in one half of the whelping box for comfort, and newspaper in the other half to encourage the pups to eliminate on the paper and keep the bedding clean.
- d. Provide supplemental heat as required for puppy comfort, but avoid overheating the whelping box so that the dam does not leave.

1.3 Sanitation

A sanitary environment is one that minimizes the risk of disease transfer as well as promotes the comfort and well-being of the dogs. It will also minimize the risk of attracting insects, birds, and animals that may be harmful to the buildings or dogs.

Detergents and disinfectants are needed for effective sanitation. The risk of disease transmission is increased with improper cleaning of the living area, and contamination of personnel and objects such as clothing, toys, bowls, bedding, and leashes. It is important for garments worn during cleaning to be relatively impermeable, protect skin and underclothing from becoming soiled, be in good repair, and be easily cleaned. Revise sanitation protocols as needed during a disease outbreak to address specific disease pathogens.

To mitigate the spread of disease it is important that a facility is cleaned and disinfected in the order of animal susceptibility to disease, with separate cleaning supplies and protective clothing for each area. Hygienic practices of cleaning and care occurs in the following order:

1. healthy puppies and healthy nursing dams;
2. healthy adult animals;
3. unhealthy puppies and nursing dams; and,
4. unhealthy adult dogs.

REQUIREMENTS

1. All enclosures are cleared of debris and cleaned of feces and urine at least twice daily, or more often as necessary to maintain a sanitary environment and good health.
 2. All waste containment/cleaning equipment, food preparation areas, food/water bowls, and utensils are:
 - i. cleaned daily,
 - ii. disinfected weekly, and
 - iii. cleaned, disinfected, and rinsed before use by another dog.
 3. Food/water storage containers are cleaned and disinfected before refilling with new food/water.
 4. Adequate personnel time is allocated daily for routine cleaning.
 5. Personnel follow hygienic practices to reduce the risk of transmitting diseases among animals and from animals to humans.
 6. An outer layer of protective clothing is worn over clothing in the isolation area and removed before leaving the area. Protective clothing includes, but is not limited to, disposable gowns, coveralls, lab coats, scrub tops and bottoms, disposable gloves, shoe covers, and/or washable shoes.
 7. Choose cleaning and disinfection chemicals and materials based on their suitability to the environmental conditions present and the pathogens for which those particular animals are at risk and in consultation with a veterinarian.
 8. Chemicals are used safely and in accordance with the manufacturers' instructions.
 9. Thoroughly rinse all surfaces and utensils that have been in contact with disinfectants and cleaners that require rinsing to avoid potential poisoning and chemical burn injuries.
 10. Safety Data Sheets (SDS) and instructions for all chemical disinfectants held are readily accessible.
-

RECOMMENDED PRACTICES

- a. Personnel time is allocated for routine cleaning of at least 10 minutes per dog.
- b. Clean feeding bowls after each feeding.
- c. Use stainless steel utensils, food dishes, and water dishes over other materials such as plastics as they are most easily cleaned and disinfected, and are more durable.
- d. Wash hands frequently with soap and water after handling animals or equipment.

1.4 Waste Disposal

Waste products include, but are not limited to: dog feces, urine, soiled litter, bedding, and food waste. Proper and efficient waste disposal is essential for the health and comfort of caregivers and dogs. The benefits of proper waste disposal are:

- controlling the accumulation of undesirable odours and ammonia levels;
- keeping animals clean and free from harmful contaminants;
- minimizing the risk of disease transmission and injury;
- protecting the environment from avoidable waste contamination; and,
- preventing exposure of wildlife to waste.

REQUIREMENTS

1. Waste products are removed at least twice daily and more frequently if the number of dogs kept, or the conditions of the housing of the dogs, necessitates collection more often.
2. Waste products are collected and disposed of promptly in a hygienic manner and in accordance with the requirements of government authorities.
3. Maintain ammonia level so as to comply with applicable health and safety regulations.

1.5 Nuisance Wildlife Control⁴

The key to controlling nuisance wildlife is to manage the environments that sustain them, including proper sanitation of waste disposal and food storage areas. To be effective, consult a specialist regarding prevention, deterrents, and control measures to protect the health and safety of caregivers and dogs.

Pesticides are poisons. They are not without risk and should always be used and stored with care. Ingested pesticides can cause severe pain, uncontrollable seizures, and death by asphyxiation or internal bleeding. They can also damage vision, balance, and other faculties. Pesticides include herbicides, fungicides, insecticides, and rodenticides.

Caution should be used when choosing and applying insecticides (such as flea and tick products) on animals, or in their environment, as misuse of these products can be harmful. For example, some products that are safely used on dogs can be deadly to cats, even in small amounts. It is important to consult with a veterinarian before using any insecticide product.

A good resource to research poisons, including insecticides and rodenticides, is:

http://www.merckvetmanual.com/pethealth/special_subjects/poisoning/general_treatment_of_poisoning.html

⁴ Formerly referred to as “pest” or “vermin.”

REQUIREMENTS

1. Have a nuisance wildlife management plan in place incorporating non-lethal preventative methods such as exclusion techniques and non-harmful physical or chemical deterrents.
2. Traps and pesticides, appropriate to the target species, are stored in locked and weighted or fastened boxes, or placed in an area that non-target animals cannot access.
3. Pesticides that are toxic to dogs are not used in kennel operations.
4. All animal remains are promptly removed and handled in a hygienic manner and in accordance with the requirements of government authorities.
5. Pesticides are only used by individuals with a government issued pesticide applicator licence or equivalent level of competence in unregulated jurisdictions.
6. Safety Data Sheets (SDS) documents for pesticides are consulted.

RECOMMENDED PRACTICES

- a. Train onsite personnel to recognize signs of nuisance wildlife, conduct regular inspections, and perform appropriate maintenance to ensure any potential access points for wildlife are sealed.

1.6 Building Safety and Emergencies

Emergency preparedness and prevention are important to animal safety and well-being. Construction and care of housing facilities in compliance with local building and maintenance legislation will decrease the risk of emergencies such as fire or power overloads related to defective design.

Sudden emergencies such as fire, flood, earthquake, or power failure directly impact the health and welfare of animals. Effective emergency plans address the need to safely and effectively provide care to animals on- or off-site. They also allow for efficient evacuation of animals and humans from the housing facility and/or property, as required.

REQUIREMENTS

1. An emergency action plan is readily available which contains:
 - i. evacuation procedures,
 - ii. emergency contacts, and
 - iii. prompt access to sufficient transport cages and vehicles.
2. Kennel personnel are familiar with the emergency action plan and a person is appointed on each shift to ensure a potential evacuation will proceed according to plan.
3. Emergency plans are available ensuring an alternative means of temperature regulation, ventilation, feeding, and watering of dogs are available in the event of a power failure, mechanical breakdown, or other emergency situation.
4. The kennel operator is aware of and compliant with the National Fire Code of Canada and the National Building Code of Canada, as well as any municipal, provincial, or territorial public health, safety, and fire protection requirements.
5. The number of smoke detectors and carbon monoxide (CO) monitors in place is compliant with applicable regulations.
6. Fire extinguishers, smoke detectors, and CO monitors are maintained in good working order.
7. Electrical equipment is maintained to prevent stray voltage and ensure wiring or electrical panels are not accessible to dogs.
8. Emergency lighting is available.
9. Frill drill exercises are performed annually.

RECOMMENDED PRACTICES

- a. Consult a local fire department for specific advice on fire prevention, particularly before renovating or building a new facility.
- b. Have local fire authorities perform a site visit to review emergency preparedness.
- c. Have appropriate fire extinguishers (Class A,B,C) located at various points in any facility and ensure kennel caregivers know of their location and proper use.
- d. Put CO monitors in place in the event the building has gas-burning appliances.
- e. Identify emergency evacuation exits.



Section 2

Food and Water

2.1 Food

Good nutrition is essential in the raising of healthy dogs. Nutrient requirements vary with life stage, activity level, environmental conditions, and physiologic states including lactation, injury, and illness. Quantities, the type of diet, and the frequency of feeding should be guided by these factors.

2.1.1 Feeding Guidelines

The three main life stages of the dog related to food intake are puppy, adult, and senior.

Puppies and reproducing animals require more vitamins, minerals, protein, and energy. The puppy life stage can be further broken down to reflect the age of the puppy and the size of the breed. For the first three to four weeks of their lives puppies are dependent on the dam for their nutritional requirements and are highly susceptible to hypoglycemia and death if milk quantity or quality is poor. Dams are free fed a palatable, high quality, and highly digestible puppy food during the last three weeks of gestation and during lactation. Feeding commercial puppy foods to the puppies begins with the first stage of weaning which is usually around three to four weeks of age. A good quality canned puppy food or dry food can be ground up and mixed with warm water. The quantity of water is gradually decreased and most puppies can be weaned by six to eight weeks of age.

The next puppy life stage is from post-weaning to adulthood. Risk factor evaluation at this stage involves preventing obesity that may carry into the adult life stage. Rapid growth rate in large breed dogs also needs to be avoided. The goal is to keep puppies lean at a body condition score of 4 to 5 on a scale of 1 to 9, where 1 is emaciated and 9 is obese.

Resting Energy Requirement (RER) growth charts (see Appendix A) are useful tools for the kennel operator to ensure proper, healthy growth rates especially when used with a Body Condition Scoring Chart (BSC) (see Appendix B). Free feeding puppies during post-weaning to adulthood should be avoided.

Once a dog reaches mature height and weight, the dog falls into the adult category. Activity levels become important at this stage to determine which diet and how many calories are ideal. Diets for high performance dogs are available as well as calorically restricted diets for canines that are prone to obesity. Following an RER chart along with a BSC will assist the kennel operator in making the best choice.

Senior diets can be divided into early senior and more advanced age. Breed will determine the appropriate age at which to start a senior diet. As a general rule, the larger the dog the earlier a senior diet is started.

On the advice of a veterinarian, a dog may be fed a veterinary-prescribed diet. These foods can help alleviate and prevent many medical conditions.

Nutritional supplements such as minerals and vitamins are generally unnecessary, provided that a good-quality, fresh commercial dog food is fed. Adding unnecessary supplements may alter nutritional balance and cause toxicities. Treat intake should not exceed 10% of the dog's total daily energy requirements.

2.1.2 Regulations and Guidelines Governing Commercial Pet Food

Canadian pet food manufacturers are subject to several Canadian and international regulations including the Canadian Food Inspection Agency's enhanced animal health safeguards which make it illegal for specified risk materials (SRMs) to be fed to any animal, including dogs and cats. Pet food manufacturers must comply with the Consumer Packaging and Labelling Act and the Competition Act, administered by Industry Canada. The regulations under these Acts specify how pet foods may be marketed to consumers, including how food is named and what information must be included on pet food labels. Members of the Pet Food Association of Canada (PFAC) also manufacture to the nutritional standards set out by the Association of American Feed Control Officials (AAFCO). The National Research Council (NRC) in the USA is the primary source for minimum nutrient requirements for healthy dogs (NRC updated, 2006). Pet food labels can be difficult to interpret as they list only minimums and maximums of key nutritional components such as protein.

AAFCO publishes yearly recommended nutrient profiles for commercial dog food in the USA. AAFCO nutrient profiles include safety factors that compensate for changes in a food's nutrient availability due to ingredient and processing variables and for individual differences in nutrient requirements within dog populations. AAFCO requires that ingredients are listed in order of weight before cooking. An ingredient, such as chicken, will reduce in weight once it is cooked as most of the moisture is removed. AAFCO allows the same basic ingredient to be split depending on the form used in the diet. For example, rice can be listed in many different ways thereby increasing the actual percentage of rice in the final product.

AAFCO also allows a manufacturer to take a reasonable period of time to change the label when changing ingredients. A fixed formulation commercial food contains ingredients which correspond to the label. Non-fixed formulations vary in ingredients and labels may not reflect the actual content. Although fixed formulations are more costly as the ingredients are not market price driven, they avoid many gastrointestinal issues related to changing ingredient content.

Commercial diets should have undergone a feeding trial that complies with AAFCO standards and nutrient content should meet the NRC standard⁵. It is important to feed a diet that matches the life stage of the dog to avoid under and over consumption of various nutrients.

2.1.3 Homemade Diets and Raw Food

Homemade diets

A nutritionally balanced homemade diet follows a properly formulated recipe that is used consistently and is appropriate for the life stage of the dog. A veterinarian is consulted for advice including whether or not meat should be cooked thoroughly to reduce the risk of foodborne disease.

5 http://www.nap.edu/catalog.php?record_id=10668

Raw food diets

Some dog owners support the feeding of a raw bones and meat diet known as BARF (Bones and Raw Food, or Biologically Appropriate Raw Foods). A diet high in raw meat and bones is likely to be deficient in essential vitamins and minerals and almost certainly will have an unbalanced calcium to phosphorus ratio, which, over time, can lead to weakened bones and fractures. The fat and protein in these diets is commonly higher than required, which can cause other problems. Health risks are associated with feeding raw meat diets since many bacteria and parasites can be found in uncooked meats, which are harmful to both humans and dogs. Young, old, and immunocompromised humans and animals can be more susceptible to the health risks associated with raw meat diets. To protect public health it is important for the personnel handling raw meat to thoroughly wash their hands, utensils, and other items that were in contact with the raw meat used in this type of diet.

2.1.4 Additions to Diets

Dogs, especially puppies, like to chew. This is a natural innate behaviour and can help prevent boredom. It is important to remove toys or treats if a dog is chewing off large pieces and ingesting them as this can cause gastrointestinal obstruction or upset. As well, remove toys if a dog's mouth becomes injured or starts to bleed, or if they damage their teeth.

The choice of foods and availability of chewing material can also affect the health and cleanliness of a dog's teeth and overall health. The best proof that a diet is beneficial to a dog's oral health is the Veterinary Oral Health Certification (VOHC) seal. Dental diets and dental treats that meet the VOHC seal are available. Certain chew toys also may have dental benefits.

Feeding bones can lead to broken teeth, intestinal injury or blockage, or cause irritation of the intestinal tract that can cause vomiting, diarrhea, and/or decreased appetite.

REQUIREMENTS

1. Mature dogs are fed at least once every 24 hours. Juvenile dogs and puppies are fed at least 2 times per day, or more frequently to maintain health and vigour.
2. Expired, spoiled, or contaminated dog food is not fed.
3. Food storage bins are covered, wildlife-proof, and properly marked.
4. Food is stored in cool, dry conditions and fed as per label to prevent spoilage.
5. Dogs receive a ration that is adequate for maintaining health, vigour, and appropriate body condition (see Appendix B).
6. Personnel thoroughly wash their hands, utensils, and other items in direct contact with dog food immediately after the food is handled.
7. Dogs fed raw diets are not in direct contact with immunocompromised humans and animals.
8. Food dishes and utensils are stored in a clean and protected area.

RECOMMENDED PRACTICES

- a. Feed adult dogs of all breeds at least two times per day. It is especially important for large breed dogs to eat smaller meals two to three times per day as they are prone to gastric dilation (bloat).
- b. Feed puppies after weaning a minimum of three times per day until they approach 2/3 of their mature weight and then twice daily through to mature weight.
- c. Refrigerate canned dog food once open to prevent spoilage and feed within a two-day period or as recommended on the label.
- d. Discard uneaten moist food that has been kept at room temperature or higher, 30 minutes after being offered for consumption.
- e. Keep food in original package.

2.2 Water

Constant access to clean fresh water is essential for good health as it:

- minimizes the risk of dehydration and overheating;
- supports proper bodily functions; and
- minimizes the risk of waterborne pathogens such as *Giardia*.



REQUIREMENTS

1. Potable unfrozen drinking water is readily accessible indoors and outdoors.
2. Water is always kept in clean containers.
3. Snow is not a primary source of water.

RECOMMENDED PRACTICES

- a. Replenish bowl with fresh water at least once a day.
- b. Containers that are fixed in place can assist in preventing accidental spillage.
- c. Avoid outdoor water sources including surface water and bodies of water as a primary source of water, due to the risk of disease transmission and contamination.
- d. Check automated watering systems and heated watering containers daily to ensure they are in good working order.
- e. Follow appropriate protocols to prevent contamination of automated watering systems.



Section 3

Animal Well-being

Animal health and animal welfare are closely linked. Practicing high standards of both is essential for optimizing overall animal well-being. High standards of animal health and welfare practices are important not only in the day-to-day care of animals, but also in planning for potential animal health or welfare challenges and preventive health care.

It is the kennel operator's responsibility to have an active relationship with a veterinarian. A veterinarian will provide expertise in developing a preventative and responsive animal care plan. In the best interest of animal welfare, it is crucial to ensure animals which develop signs of illness, injury, pain, and suffering are provided with appropriate medical attention in a timely fashion. Doing so will reduce the risk of disease spread, debilitation, and death.

Veterinarians are licensed professionals. Each province/territory has its own veterinary licensing body that decides what professional acts can be performed only by a licensed veterinarian. This can differ across jurisdictions. Any non-veterinarian who performs an act that can only be performed by a licensed veterinarian can be prosecuted for practicing veterinary medicine without a license. In provinces in which veterinarians are prohibited by law from performing cosmetic surgeries, such as tail docking, dewclaw removal, and ear cropping, veterinarians can be prosecuted by their veterinary licensing body for illegally performing these procedures.

The CVMA is a national organization of veterinarians. It is a non-governing body in that it can make recommendations and develop position statements and guidelines; however, these are not enforceable under the law. In some cases, veterinary or provincial/territorial statutory bodies may decide to adopt CVMA recommendations by encoding or referencing them in their regulations. For example, the CVMA is formally opposed to cosmetic surgeries such as ear cropping, tail docking, and dewclaw removal by veterinarians unless they are done for therapeutic reasons. Not all provincial/territorial statutory bodies or veterinary licensing bodies, however, have enshrined this position into their regulations and/or professional standards.

3.1 Principles of Health Management

The following parameters will support the maintenance of a complete healthcare program in order to maintain a dog's health and well-being:

- daily monitoring and recording of animal health parameters;
- staff training to help identify normal animal health and behaviour;
- staff training to recognize signs of animal illness, injury, and abnormal behaviours; and
- preventative healthcare practices in place and recorded.

Implementing these parameters will promote prevention of a health or welfare crisis.

REQUIREMENTS

1. The kennel operator has a valid veterinarian-client-patient relationship (VCPR) with a licensed veterinarian(s) responsible for providing advice on prevention and control of diseases and for the provision of prompt adequate veterinary care for all ill or injured dogs and dogs showing signs of pain or suffering.
2. The information for contacting the veterinary clinic/hospital, emergency care facility, kennel operator, local fire/police, and alarm company is posted in a location readily accessible to all kennel staff.
3. Incoming dogs and puppies are quarantined as deemed appropriate by a licensed veterinarian to reduce the risk of disease transmission.

RECOMMENDED PRACTICES

- a. Make provisions for access to 24-hour emergency veterinary care.

3.1.1 *Monitoring*

Daily monitoring of dog health and behaviour allows for prompt identification and treatment of animal disease, illness, and injury and promotes good health of all animals in the kennel.



Parameters of canine health that are important to monitor and document include:

- **Weight:** Record weekly for animals less than eight weeks of age, monthly for animals eight weeks to one year of age, every six to twelve months for adults, or more frequently as advised by a veterinarian or in the event of excessive weight loss or gain.
- **Respiration:** If breathing abnormally, check frequency, effort, and noise; if coughing or sneezing, check frequency and severity.
- **Eyes, ears, nose:** If discharge is present, check severity, colour, and/or consistency; check frequency of abnormal head shaking, eye squinting, or ear scratching if present.
- **Thirst and Hunger:** Record types of food provided; appetite and thirst levels; and frequency, consistency, contents and odour of vomit if occurring.
- **Urination:** Check for abnormal frequency, volume, colour, odour, and/or increased effort to urinate.
- **Defecation:** Check for abnormal frequency, volume, colour, odour, consistency, and/or straining.
- **Mouth:** Note any drooling, bad breath, loose/broken teeth, oral pain, coloured discharge, difficulty swallowing, and reluctance to open, close, or pick up toys or food.
- **Bones, muscles, movement:** Note changes in gait, limping, difficulty in getting up, lying down or sitting, pain to specific areas, and/or abnormal swelling/heat/redness.
- **Skin and fur:** Note skin bruising, redness, wounds, sores, discharge, lumps, and/or pain; note fur loss, discolouration, odour, matting, and/or dander.
- **Reproductive organs:** Note any abnormalities to the genital area or mammary glands including swelling, discharge, pain, positioning, and/or size; note heat cycles and abnormal timing of heat cycles.
- **Alertness and behaviour:** Note any abnormalities including agitation, depression, aggression, anxiety, fear, withdrawal, excess chewing/licking/grooming, and/or reluctance to play or interact with other animals/people.

3.1.2 Record keeping and Identification

Identification and record keeping are essential for successful management practices, to ensure consistency and continuity of effective animal care, and to allow for timely recognition of changes in facility and animal conditions.

Identification of individual dogs allows them to be differentiated from each other in the kennel, tracks their travel history, and ensures they are not misplaced within the kennel. Many types of identification are available that can be applied in a humane manner that avoids pain.

Premises maintenance records ensure the kennel facility is in good working order and allows for prompt identification and repair of areas delete identified as being damaged or in need of upgrading or replacement. This facilitates a safe, comfortable work environment for personnel and helps prevent animal stress and discomfort.

Maintaining complete animal health records:

- allows for prompt access to information about preventive care and medical care received due to illness or injury;
- allows caregivers to identify trends or changes in animal health status; and
- aids in making plans for the kennel to prevent or address future health concerns in the animals.

REQUIREMENTS

1. All adult dogs and non-nursing puppies have easily read, humanely applied, unique identification. Examples include, but are not exclusive to, a labelled collar, microchip, tattoo, or nose print. Nursing puppies can be uniquely identified by gender or coat markings, or, where necessary, use of a visual marking.
2. In premises housing multiple dogs, enclosures are labelled to indicate which dogs are housed within them.
3. All records are kept current, readily accessible by personnel either on-site or by a veterinarian, and maintained in legible written and/or electronic format.
4. Individual animal records include changes in appetite, food type, thirst, urination, defecation, or behaviour.
5. Individual animal identification records include:
 - i. date of birth, breed, gender, colour, markings.
 - ii. nose print, tattoo, tag, and/or microchip number if present.
 - iii. name, phone number, email and physical address of dog's owner.
 - iv. for temporary care: date of arrival and departure.
 - v. for transfer of dog ownership: date and source of acquisition or departure, including name, physical address, telephone number, and email of new or previous owner and contracts/agreements regarding sale or purchase of animals.
 - vi. if applicable, date of death and suspected or confirmed cause of death.
6. Individual animal health records are kept and include information on:
 - i. dates and test results for common infectious diseases, at a frequency schedule deemed appropriate by the veterinarian (i.e., fecal testing for intestinal parasites, blood testing for heartworm).
 - ii. dates and name of individuals performing medical procedures for breed cosmetic or conformation purposes where permitted (i.e., dewclaw removal, tail docking, ear cropping).⁶
 - iii. vaccination/deworming treatment, including dates of treatment, name, and dose of medication administered.
 - iv. date of spay or neuter if altered.
 - v. date of diagnosis of illness or injury and diagnostics and/or treatment provided.
7. Individual whelping records for:
 - i. sire - include dates bred, dams bred to, successful/failed breedings, pre-breeding testing, and applicable test results for hereditary defects.
 - ii. dam - include dates in heat, dates bred, sires bred to, successful/failed breedings, whelping dates, number per litter including live/dead births, birthing complications, and applicable test results for hereditary defects.
 - iii. offspring - include weight measured weekly until weaned, or more frequently as required if showing signs of illness/injury or weight loss.

⁶ See appendix for CVMA positions on these procedures.

8. Keep records of maintaining fire extinguishers, and smoke and CO detectors in good working order for two years.
9. Records for all animals are kept for a minimum of two years after the animal leaves the premises or dies on premises.

RECOMMENDED PRACTICES:

- a. Provide permanent identification for each dog using a microchip implant that is ISO compliant as required by the National Companion Animal Coalition (NCAC).⁷ When required by the provincial governing body, this act is performed by a licenced veterinarian or a qualified technician under veterinary supervision.
- b. Keep paper records in a moisture and fireproof container.
- c. Back up electronic records.
- d. Maintain cleaning schedules noting dates/times the facility was cleaned and by whom.
- e. Keep premises maintenance records of equipment and building maintenance, repair, replacement, and renovation.

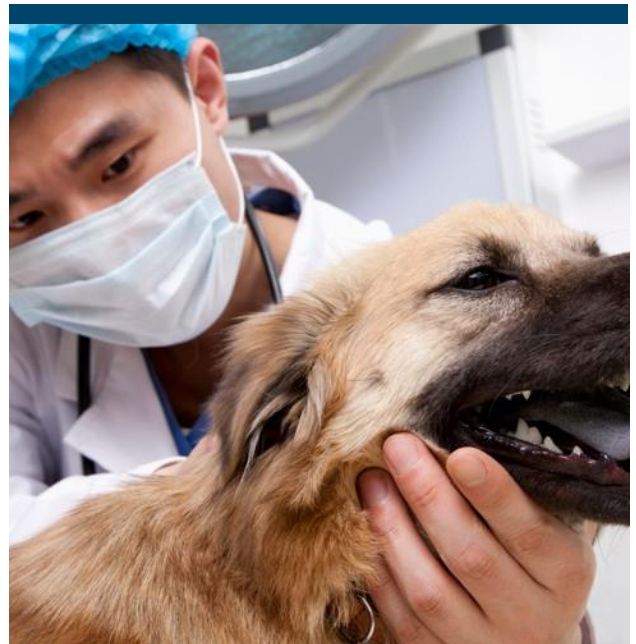
3.1.3 Health Care

Parasites and Infectious Diseases

Numerous parasites and infectious organisms can cause serious disease in dogs of all ages and can also cause disease in animals including dogs and humans. Parasites and disease can spread to other animals and humans either by direct contact with the animals themselves or by contact with the environment in which the diseased animals live. In a kennel/breeding facility the prevention and control of parasites and infectious disease, in combination with good hygiene practices, is essential to protect animal and human health.

Parasites and infectious diseases that will be discussed in more detail include ticks, roundworm, heartworm, lungworm, parvovirus, and ringworm. These agents are common across a wide geographical range in Canada and/or are newly emerging diseases that are anticipated to be of significant concern in the future. Regular consultation with a veterinarian will provide the expertise required to evaluate which parasites and infectious organisms pose a threat to the kenneled dogs.

The prevalence of canine parasites and infectious diseases within Canada are influenced by environmental variables including, but not limited to, local climate variation, emerging climate change, urbanization and migration of wildlife, and animal importation. Developing resistance to traditional treatment methods and viral/bacterial mutation also influence the prevalence of parasites and infectious disease. A veterinarian can work in cooperation with kennel operators to determine the most effective preventive and treatment programs to successfully manage parasites and infectious diseases that pose a risk to animal and human health in the kennel environment.



Ticks

Ticks are small parasites that can carry viruses and/or bacteria that are harmful to both dogs and humans. Ticks have mouthparts that attach to the skin of dogs and humans in order to get a blood meal. During this period of attachment, they can transfer harmful viruses and/or bacteria into the animal's bloodstream and cause disease.

Local veterinary and human medical health professionals can advise dog owners what ticks are common locally. Although mostly found in wooded or grassy areas, ticks can be found almost anywhere because they are carried by birds and other animals they feed on.

Approximately 40 species of ticks can be found in Canada. Outdoors, tick season begins as soon as there is a 24-hour period in which temperatures are above the freezing point and continues until hard

frost kills the ticks. With warm weather, the ticks seek out hosts, such as dogs or humans. They do so by detecting movement and increasing changes in temperature, such as an approaching warm body. Some ticks can survive for extended periods of time indoors.



The signs of disease that a dog will show depend on the infecting pathogen. As the climate changes, new geographic areas become infested. The period of preventative treatment for tick-borne diseases changes yearly. A tick preventative treatment program can be re-evaluated every year with the kennel operator's veterinarian.

Intestinal Parasites

Many different parasites can live in a dog's gastrointestinal system. The prevalent types of parasites will vary regionally, taking into consideration both the point of origin of a newly incoming dog to a kennel and the location of the kennel. The kennel operator's veterinarian will be the best source of information when designing an effective preventative deworming program.

One of the most common parasites found in a dog's gastrointestinal system are roundworms. They can be transmitted from the dam to the puppies in the uterus (*in utero*) or through the milk of the dam. They can also be transmitted by ingestion of infected feces. An effective roundworm preventative program will decrease the risk of infection of puppies and adults.

Other common intestinal parasites include, but are not limited to, coccidia, cryptosporidium, giardia, hookworms, whipworms, and tapeworms.

Intestinal parasites can be very difficult to remove if the kennel environment becomes infected. Effective preventative deworming programs include avoiding overcrowding and ingestion of raw meat or prey, immediate removal of feces, and excellent hygiene standards to prevent surface contamination.

Heartworm (*Dirofilaria immitis*)⁷

Mosquitos act as the vector for transmission of heartworm disease. It takes about seven months, once a dog is bitten by an infected mosquito, for the larvae to mature into adult heartworms. They then lodge in the heart, lungs, and surrounding blood vessels and begin reproducing. Signs of heartworm disease may include a mild persistent cough, reluctance to exercise, fatigue after moderate activity, decreased appetite, and weight loss. As heartworm disease progresses, pets may develop heart failure and the appearance of a swollen belly due to excess fluid in the abdomen.

Heartworm disease is a serious, progressive disease. The earlier it is detected, the better the chances the pet will recover. There are few, if any, early signs of disease when a dog is infected with heartworms, so detecting their presence with a heartworm test administered by a veterinarian is important.

Climate change and movement of infected dogs will affect the distribution of heartworm and therefore may alter the risk of heartworm disease in a geographic area. Local veterinarians are the best source of information for developing an effective heartworm preventative program for a kennel. Important considerations when evaluating the risk of heartworm disease, and recommending an effective control and treatment for the kennel include, but are not limited to:

- Heartworm testing of newly acquired dogs that were previously living in a heartworm prevalent location;
- Preventative treatment of dogs if the kennel is in a heartworm prevalent area, starting within one month of the beginning of mosquito season and extending one month beyond the end of mosquito season;
- Testing dogs older than seven months of age for heartworm disease before beginning heartworm preventative medication (testing of dogs before six months of age is not productive because the time from when an animal is infected with heartworm disease to when they will test positive for heartworm is at least six months);
- Dogs displaying signs of illness compatible with heartworm disease are promptly examined and treated as recommended by a veterinarian;
- Dogs living in heartworm prevalent areas are tested regularly for heartworm as directed by their local veterinarian; and
- Kennel operators who forget to administer preventative treatment to dogs in heartworm prevalent areas promptly consult with their veterinarian on appropriate follow-up care.

Lungworm⁸

Infection with canine lungworm is an emerging disease in Canada. Lungworm is a generic name for infection caused by one of a few different parasites that live in the respiratory tract. A variety of different lungworms can cause disease in different species of animals including dogs, and have been found in various geographical regions. Lungworm has been identified as being distributed over a wide range of the southern and eastern parts of Ontario, and in Atlantic Canada. Consult with a local veterinarian to determine the level of risk for lungworm infection and appropriate preventative strategies.

7 <https://www.heartwormsociety.org/pet-owner-resources/heartworm-basics>

8 <http://www.wormsandgermsblog.com/2016/02/articles/diseases/parasites/lungworm-in-ontario-dogs/>

Parvovirus

Canine parvovirus (CPV) infection is a highly contagious viral illness that affects dogs. The virus manifests itself in two different forms. The more common form is the intestinal form, which is characterized by vomiting, diarrhea, weight loss, and lack of appetite (anorexia). The less common form is the cardiac form, which attacks the heart muscles of very young puppies, often leading to death. Most cases are seen in puppies which are between six weeks and six months old. The incidence of canine parvovirus infections can be reduced radically by early vaccination of young puppies.

Dermatophytes (Ringworm)

Due to the close proximity among dogs in kennel/breeding situations and their zoonotic potential, infectious fungi can easily be transmitted among animals and from animals to humans.

Dermatophytes can manifest in many different clinical signs, but the most common signs are skin lesions. Dermatophytes can cause variable skin lesions including, but not limited to, hair loss, itchiness, and reddened and/or darkened skin. A Wood's lamp test is an initial method of detection and hair culture is often required to reach a conclusive diagnosis. Prompt veterinary care will control outbreaks and also reduce the risk of human infection.



REQUIREMENTS

1. Sick, injured, or diseased animals receive prompt treatment and nursing care. The treatment is appropriate for the condition. For animals that are not responding to treatment(s) according to protocols agreed to in advance with the kennel's veterinarian, veterinary advice is obtained without delay.
2. Dogs diagnosed with ringworm are to be isolated away from other animals and treated until a veterinarian has determined them to be cleared of infection, which typically is based on negative culture results. Puppies from the same litter that have tested positive can be housed together. These puppies/dogs are not sold or moved to a different facility until a veterinarian has determined they are no longer infected.
3. In the case of disease outbreak, kennel personnel wear appropriate personal protective equipment (PPE) as recommended by a veterinarian.
4. Fecal tests are carried out at least yearly by dog owners, more often in the case of disease outbreaks, or as deemed appropriate by a veterinarian.
5. All animals with test results positive for parasitic, viral, bacterial, or fungal infection receive appropriate treatment as recommended by a veterinarian.
6. Puppies are treated for intestinal parasitic infections with an agent effective against at least roundworm infection at two, four, six, and eight weeks of age, or as recommended by a veterinarian. Dams housed with puppies between two and eight weeks of age are dewormed at the same schedule, or as recommended by a veterinarian.
7. Dams are treated for intestinal parasitic infections before mating, with an agent effective against roundworm infection.
8. Adult dogs receive preventative treatment from dog owners at least bi-annually for common parasitic intestinal infections (e.g., roundworm) with an effective agent, or as recommended by a veterinarian.
9. Personnel are immediately notified of any zoonotic disease diagnosed in dogs.
10. All dogs are checked regularly for the presence of common external parasites such as fleas and ticks. All ticks found attached to a dog's skin are promptly and properly removed.

RECOMMENDED PRACTICES

- a. Consult with a veterinarian about kennel sanitation and health protocols upon receipt of positive tests for parasitic, bacterial, viral, or fungal disease.
- b. Institute a flea and tick prevention program in prevalent areas as recommended by the veterinarian.
- c. Institute heartworm testing and preventative treatment as recommended by the veterinarian.
- d. Kennel personnel seek immediate care from a physician when showing clinical signs compatible with zoonotic infections.
- e. Kennel personnel immediately notify the kennel owner/operator if diagnosed with zoonotic disease.

3.1.4 Vaccinations

Strategies for vaccination in a kennel are different in many ways from those for a privately owned pet. The risk of exposure to disease is increased, and the consequences of infection are potentially more severe for both the affected animal and the kennel population. A well-designed vaccine program can be a life-saving tool to keep kenneled dogs healthy. Some vaccines provide protection within a few days or even a few hours of administration, and can drastically reduce the occurrence of debilitating disease in a kennel.



Other vaccines, while slower acting and potentially requiring booster vaccines to achieve maximum efficacy, can prevent disease both within the shelter kennel and after release to new owners. Disease prevention through an effective vaccine program benefits the health of dogs in a kennel, as well as the health of potential buyers and their pets. Only CFIA-approved veterinary biologics are used in vaccine protocols.

Appropriate kennel vaccination protocols for puppies and adult dogs within each kennel will vary according to several factors and are best determined by consultation with the veterinarian. Some of the factors to be considered include:

- The amount and quality of maternally derived antibodies (MDA) ingested during the puppies' first few weeks of life. For example, puppies which do not receive colostrum will require earlier vaccination than those which receive adequate quantities of MDA.
- Vaccine efficacy may be reduced in puppies which have high MDA and as such will require a final vaccination after 14 to 16 weeks of age.
- The prevalence of various infectious agents in the environment and breed susceptibility.
- Puppies and dogs participating in socialization and training programs with animals external to the kennel are at more risk of contracting infectious disease.

REQUIREMENTS

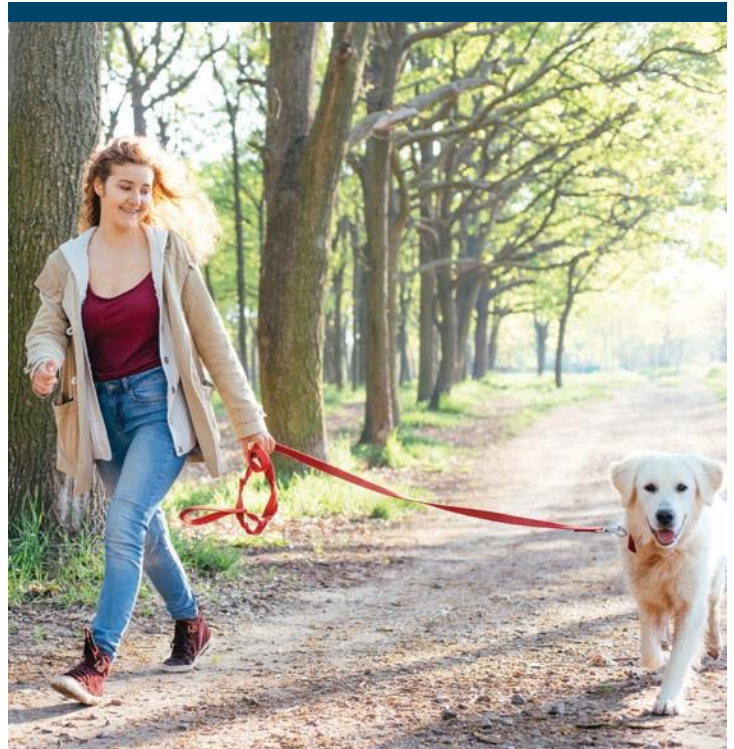
1. DA2P vaccines: Unless otherwise recommended by a veterinarian, puppies receive their initial vaccine between six to eight weeks of age and then receive at least two to three booster vaccines three to four weeks apart, such that final vaccination is administered between 14 and 16 weeks of age and 18 and 20 weeks in higher risk environments. Unless otherwise recommended by the veterinarian, adult dogs receive a booster vaccine one year after their final puppy vaccine and then on a schedule recommended by a veterinarian.
2. Rabies vaccines: Unless otherwise recommended by the veterinarian, puppies receive initial vaccines between three to four months of age. Unless otherwise recommended by a veterinarian, adult dogs receive a booster vaccine one year after the puppy vaccine and then on a schedule recommended by a veterinarian.
3. Vaccines are stored and administered in compliance with provincial legal requirements from the veterinary governing body.
4. Before eight weeks of age, puppies only contact and/or socialize with dogs current on vaccines and are not exposed to environments in which dogs with unknown vaccine status have been present.

RECOMMENDED PRACTICES

- a. Administer and keep vaccines current against Lyme disease, Leptospirosis, Bordetella, Parainfluenza, Influenza, and Coronavirus as recommended by a veterinarian.

3.2 Caregiver Training and Duties

It is the responsibility of kennel operators to ensure animal caregivers are appropriately trained, suitably experienced, and knowledgeable in meeting the health and welfare needs of dogs. The conduct of kennel caregivers with animals and humans is integral to the reputation of the premises as they are often perceived by the public to represent the ideals of the facility.



REQUIREMENTS

1. Caregivers provide ongoing effective, regular observation, and health care.
2. Caregivers ensure dogs do not associate with incompatible dogs, other adversarial animals, or nuisance wildlife.
3. The number of caregivers and their experience are sufficient to ensure the daily health and welfare requirements of dogs.
4. Enough time is assigned to complete sanitation tasks promptly each day so dogs are kept in sanitary conditions.
5. Caregivers are adequately trained and knowledgeable in animal care and husbandry. This includes knowledge of:
 - i. appropriate low-stress handling, restraint, training, grooming, and exercise;
 - ii. recognizing and taking appropriate action when animals display behaviours indicative of stress, anxiety, depression, aggression, incompatibility, illness, and injury;
 - iii. daily recordkeeping;
 - iv. sanitation protocols;
 - v. infectious disease protocols;
 - vi. proper maintenance, identification, and reporting of damage/deterioration of kennel facilities to ensure effective repair and prevent negative impacts on animal health and well-being;
 - vii. emergency protocols within the premises such as response to flood/fire, power failure, evacuation, accidental/acute animal injury/illness, and emergency contact procedure(s); and
 - viii. appropriate respectful interactions with animals, colleagues, and the public.

RECOMMENDED PRACTICES

- a. Evaluate caregivers every six to 12 months to review their competency at completing assigned responsibilities.
- b. Offer training opportunities to caregivers to improve their skills.
- c. Keep records of performance concerns for caregivers and address concerns in a timely fashion to avoid negative consequences for other dogs and humans in the kennel.
- d. Allocate a minimum of 15 minutes per day per dog for feeding and cleaning, as referenced in the Canadian Standards of Care in Animal Shelters.⁹

9 <https://www.canadianveterinarians.net/documents/canadian-standards-of-care-in-animal-shelters>

3.3 Behaviour, Socialization, Training, and Enrichment

3.3.1 Behaviour

Puppies are born with certain innate temperament traits. The degree to which these traits are displayed as behaviours is determined by genetics learned experiences, and socialization. Certain undesirable behaviours are at the greatest risk of developing in the first 12 weeks of life. Behaviour traits affect public safety, the ability of the animal to integrate successfully into society or their kennel, and maintain a good quality of life.

Actions such as biting, aloofness, prey stalking, misdirected herding, and excessive barking can cause conflict with humans or other animals. For dog breeds with character traits that could cause conflict in society, it is important for breeders to be diligent in selecting breeding stock, and properly training, socializing, and managing expressed behaviour responsibly. This minimizes both the risk of psychological stress to the animals and public safety risks. Responsible breeders will carefully screen potential buyers and educate them on the temperament traits inherent to that breed and the individual animal.

The role dogs are to have in their future homes as pets, place of work, or sport, will determine which behavioural traits are desirable. For example, herding dogs are best raised in an environment that stimulates their desire to work and enforces appropriate behaviours toward the types of animals and the humans they will be working with.

Look for compatibility between the dog and the future owner with regard to the person's ability to successfully manage the dog's behaviour in their future home. It is important for potential owners to describe their home environment and lifestyle in detail and demonstrate an ability to make the commitment to the dog's behavioural needs.

3.3.2 Socialization

Early exposure to and positive associations with novel environmental stimuli are important in raising socially well-adjusted dogs. Habituation refers to the process of an animal becoming non-reactive to commonly encountered non-harmful environmental stimuli. The level of stimuli exposure is kept low enough so as not to provoke a fearful response in the dog. Household noises, objects, and smells can all be incorporated into an early stimuli exposure program. Common noise stimuli include vehicles, sirens, television, doorbells, kitchen noises, thunder and lightning, vacuum cleaners, and knocking. Common tactile stimuli include carpet, concrete, water, snow, ice, tile, and grass, and various indoor and outdoor environments. Common visual stimuli include, for example, statues, umbrellas, balloons, and wheelchairs.



Socialization of the puppies is a primary goal for all kennel operators and caregivers. A socialization process of controlled, positive exposure of an animal to their own species, other animals, humans, and novel stimuli is essential for normal behavioural development. Puppies are in the critical socialization period from as early as three weeks up to and including 12 weeks of age. During this period, brain chemistry is developing emotional intelligence and the dog is learning to become a functioning member of both human and dog societies. During this time, as little as one exposure to novel stimuli is enough to shape a puppy to learn or accept something new. After 12 weeks of age, novel situations can be perceived as potentially dangerous and can invoke a fear aggression response.

During the socialization period puppies can benefit from being exposed to humans with various characteristics, including different ages, genders, and physical characteristics, such as glasses, hats, and beards. Early exposure of puppies to humans greatly influences the future acceptability of the animal in a home setting. Ensure humans who socialize the puppies have clean hands and feet to decrease the risk of transmitting illnesses among dogs. Daily gentle handling of the puppies gradually increases their plasticity and ability to adapt to change and stress. Improperly socialized dogs are fearful of humans, may become fear-biters, and may have more difficulty with handling and cohabitation.

Effective dog socialization includes interaction with other dogs. Puppies learn important developmental behaviours from other puppies and adult dogs, through imitation and play. Most dogs benefit significantly from a minimum of 30 minutes per day of contact with other dogs and, if appropriate, when housed together. Negative experiences associated with stimulus at this age can be detrimental. Rough dog interactions, in particular, run a high risk of imprinting dog-to-dog aggression. Effective supervision and intervention by caregivers minimizes negative experiences.

It is important for owners to be informed that during the puppies' development in the first year, they may experience periods of fear in which they are very sensitive to traumatic experiences that can have a lifelong effect on future behaviours. Research indicates that the eight- to 10-week period is a particularly sensitive time.

3.3.3 Training

Reward-based methods used in humane training have resulted in positive long-term impacts of decreased aggression, attention-seeking, and fear. There is also evidence that these methods improve a dog's ability to learn. Behaviour modification through classical conditioning and/or desensitization and counter-conditioning can be effective when performed below the threshold that would cause distress, anxiety, or fear in a dog. Aversive training techniques are strongly discouraged. These methods may include confrontational and/or physical methods of training such as the use of force, rolling dogs, scruffing, growling, muzzling, jowling, shaking, or staring dogs down. Such techniques create fear and therefore may increase the likelihood of a fear-induced aggressive response. Similarly, the use of aversive devices such as choke, pinch, prong, or electronic collars is strongly discouraged in favour of more humane alternatives such as head halters.¹⁰

10 <https://www.canadianveterinarians.net/documents/humane-training-methods-for-dogs>

Kennel operators can begin practical skills training from the moment a puppy first begins to jump. A four-week-old puppy's instinct is to jump when asking to interact socially. Teaching the puppy that he is heard through a sit behaviour is crucial for later behaviour. Rewards can be given from that age for keeping all four feet on the floor and sitting. A high-pitched sound can be used to call the puppies to come to their food. In time, that sound can be matched with a command such as "come" and subsequent reward. Finally, a kennel operator or caregiver can teach a puppy that they can offer a desirable behaviour and get a response from humans. Using clicker training, puppies can be rewarded each time they step onto a mat or shoe box lid. A dog that understands this concept realizes the best way to get what they want is to rely on a human. This teaches impulse control.

New dog owners are strongly encouraged to continue reward-based training initiated by the kennel operator. Training classes offer a great opportunity in which to teach dogs positive behaviours and to teach owners how to successfully train their new dog. It is important for dogs to be current on their vaccination schedule and follow a deworming schedule determined by their veterinarians before attending these classes.

Dogs benefit from a space of their own where they can feel secure. Dogs can vary in their selection of this space, which will allow a dog to self soothe when stressed and provide a safe place to take a rest after a training or exercise session. At times, a confined structure is best for the safety of the dog and humans. Puppies benefit through separation from their litter for short periods of time to help cope with the eventual separation when they are sold. Providing a high-reward treat in a secure space is one way to encourage this separation. The length of time they are alone may be gradually increased over time.

3.3.4 *Enrichment*

Studies have shown that animals raised in an enriched environment are able to learn and retain more information. These animals are also more stable and cope with and recover from frightening or stimulating situations more effectively. The results of positive and varying stimuli in the environment are smarter, and more interactive and trainable dogs.



Caregivers can provide enrichment for dogs through regular play, and by exposing dogs to various outdoor and indoor settings, toys, training, exercise, and affection. Dogs are social animals and benefit from social interaction with their own species and/or with humans. There are many sources available on suitable enrichment for dogs. Failure to provide enrichment can lead to development of boredom, anxiety, insecurity, and destructive behaviours. This can eventually lead to the development of stereotypic behaviours, such as excessive grooming or repetitive pacing.

A stimulus rich environment includes interactive toys, tunnels, steps, and obstacle courses that are constantly changing. New games and training challenges keep the puppies and adults stimulated, learning, problem solving, and promotes self-confidence.

REQUIREMENTS

1. When placing dogs in homes, evaluate the behaviour of dogs and ensure the home is suited to their personality and behavioural traits. Explain to potential owners the behaviour characteristics of the dog of interest before sale or exchange.
 2. Socialization and humane-training plans that expose dogs of all ages to positive experiences are in place and readily available for review. These plans teach the development of confidence and trust; and do not expose dogs to negative experiences that result in fear, pain, injury, or illness.
 3. Humans who interact with dogs of all ages ensure their clothing, hands, and feet are clean in order to minimize the risk of disease transmission to dogs.
 4. Starting at birth, caregivers handle puppies gently on a daily basis.
 5. Puppies between three and eight weeks of age receive a minimum of 20 minutes twice a day of socialization with humans. Some of this time is spent with each puppy individually.
 6. Dogs and puppies older than eight weeks of age receive a minimum of 30 minutes per day of contact with other compatible dogs, and at least 30 minutes per day of direct contact with humans.
 7. Puppies between eight and 12 weeks are exposed to experiences outside the kennel environment, including leash walking, car rides, and positive veterinary visits.
 8. Daily enrichment is provided to dogs. Enrichment includes play, exposing dogs to various outdoor and indoor settings, toys, training, exercise, and affection. The type of enrichment tools and length of exposure will vary greatly depending on the age and temperament of the dog.
-

RECOMMENDED PRACTICES

- a. Seek professional help from veterinarians and trained behaviourists as quickly as possible if undesirable behaviours develop.
- b. Ensure dogs to be sold to new owners are well-adapted socially, do not display aggression or maladaptive fear, and readily display personality traits suited to possible future environments.
- c. Begin early reward-based training programs at the kennel and encourage new owners to continue training the dog in its new environment.

- d. Habituate and/or socialize dogs with other animals of the same and other species when compatible and safe to do so.
- e. Habituate dogs to various environmental stimuli outside the kennel.
- f. Expose dogs to humans of varied age, gender, size, and dressed in varied attire.
- g. Expose puppies to small daily changes in their enriched environment. The level of change and challenge is increased as the puppies grow older.
- h. Provide adult dogs with challenges that promote learning and self-confidence.



Section 4

Husbandry Practices

4.1 Responsible Breeding

The breeding of dogs is a serious responsibility that requires a commitment of education, time, and financial resources. Responsible breeders have an in-depth understanding of animal health and welfare. They strive to breed dogs that experience a good quality of life. A good quality of life is one in which dogs normally experience a state of complete physical, mental, and social well-being, without disease or illness. Breeders can achieve this



by following the requirements and recommended best practices established in the CVMA Code of Practice for Canadian Kennel Operations and by having a good working relationship with a veterinarian.

Responsible breeders have extensive knowledge of the breed's history and are up-to-date with new research relevant to the breed. They work to prevent inbreeding and genetic defects. Their end goal is to produce a breed conformation in which the dog is able to exhibit natural behaviours with ease. Responsible breeders will work to eliminate conformation traits that negatively affect the dog's ability to perform normal functions such as unobstructed breathing, being able to give birth naturally, and moving without pain and with a normal range of motion. Breeders will provide written guarantees of a dog's health and conformation, providing results to the buyer for any medical testing that has been performed specific to a breed's predilection for certain genetic problems. Additionally, they will only raise one or two specific breeds. Responsible breeders will seek constant improvements to the dog's temperament, conformation and suitability to their chosen environment.

Responsible breeders will provide enriched environments with adequate socialization and evaluate early behaviour traits to ensure proper placement. A responsible breeder will stand by their dogs and accept returns when the match with a new owner is not right.

4.1.1 Genetics, Conformation, and Temperament

Genetics

Genetics, the environment, and developmental factors play an important role in both the physical appearance and temperament of puppies. Selection of both the male and female are equally important when choosing a breeding pair as puppies inherit half their genetic material (DNA) from each parent. Puppies in one litter will vary in genetic makeup.

Genetic traits can be labelled dominant or recessive. When a gene is dominant the puppy only needs to inherit it from one parent for the gene to be expressed. When a gene is recessive, in order for the gene to be expressed, the puppy must receive it from both parents. Testing for inherited disease aims to improve the overall genetic health of offspring. With advances in genetic DNA testing, it is now easier for breeders to select breeding pairs that are at lower risk of passing on non-desirable genes to their puppies. If a dog tests positive for genetic disease using DNA testing, then they are not a good candidate for breeding.

Where validated tests for inherited disease are available, it is in the best interest of dogs intended for use in breeding to be tested and re-tested as advised by a veterinarian. A veterinarian can evaluate test results to determine which animals are well-suited for a breeding program and which animals are unsuitable for breeding.

For inherited disorders in which no suitable detection test is available, breeders can consult with a veterinarian and a reputable source of information on inherited problems in the breed to assess the occurrence of these disorders in their genealogy and develop an appropriate breeding program.

Whether or not to breed related dogs is a serious consideration with respect to the health of their offspring. Breeding of dogs related to one another will increase both the positive and negative traits of those individuals in their offspring. If dogs with similar genetic problems are bred together, these problems will become more emphasized in their offspring; therefore, these dogs are not good candidates for a breeding program. Physically apparent genetic problems such as shortened noses, significantly angled joints, or excessive skin folds are easily recognized. Do not breed dogs with similar problems. Internal genetic problems such as hip dysplasia, kidney disease, or eye disease, are not easily recognized. Genetic screening tests using X-rays, blood testing, and ultrasound can help identify internal genetic problems. Dogs positive for these genetic problems are not suitable for a breeding program.

It is the responsibility of the breeder to inform potential dog owners of inherited diseases within the breeds they are raising and to disclose all available test results for the dog and its sire and dam. Potential dog owners are well-advised to be aware of what genetic diseases can exist in the prospective breed.

An excellent site listing hereditary diseases in dogs can be found at <http://discoveryspace.upei.ca/cidd/>. More information on breeding health issues may be obtained from the Canine Health Information Centre at <http://www.caninehealthinfo.org/>.

Conformation

Conformation refers to the general shape, structure, and appearance of a dog. The breed standard for conformation is a description of the breed's appearance and movement. Breed standards differ around the world. Most breed standards include conformation describing general appearance, temperament, balance and size, coat and colour, head, neck, forequarters, body, hindquarters, tail, and gait. The notion of ideal conformation is largely subjective.

It is in the best interest of animal health and welfare that breeding stock and offspring be able to see normally, breathe normally, move with normal range of motion and exercise tolerance, and give birth naturally. Some breed standards perpetuate conformation traits that negatively impact quality of life and ability to practice normal behaviours. This is undesirable.

Abnormalities in bone and joint composition predispose the dog to joint disease, arthritis, and an inability to bear weight normally. Shortened respiratory tracts can result in constant obstructed breathing or exercise/heat intolerance. Excessive skin folds can lead to increased susceptibility to skin infection or damage to other parts of the body. Faulty conformation in the areas surrounding the eyes will result in an increased risk of eye disease and can compromise vision. The dam can be prevented from giving birth naturally if the puppies have large broad heads.

Temperament and Breed Traits

Puppies are born with certain innate temperament traits. The degree to which these behaviours are displayed is determined by genetics, environmental factors including positive or negative experiences, and socialization.

Prevention of undesirable breed traits being passed to offspring begins with the selection of the sire and dam. Many tests exist for temperament evaluation and may be useful to the breeder for detecting problem behaviours. Temperament traits to be tested for include aggressiveness, excitableness, fearfulness, anxiousness, and playfulness.¹¹

Responsible dog breeders are aware and knowledgeable of potentially undesirable behaviours, and they will carefully screen their breeding stock and offspring to eliminate problem behaviours from the gene pool.

11 Jones AC, Gosling SD. Temperament and personality in dogs (*Canis familiaris*): A review of evaluation of past research. *Appl Anim Behav Sci* 2005;95:1-53. doi:10.1016/j.applanim.2005.04.008

REQUIREMENTS

1. Breeders are educated about the common inherited diseases and conformation traits that may negatively impact quality of life and prevent normal functions for the breeds they are raising.
2. The dam and sire are not bred for the first time until genetic testing, as recommended by a veterinarian, is performed on dogs whose breed carries inherited diseases.
3. Dogs that test positive for inherited diseases are not bred.
4. Breeders provide new owners with genetic test results for both the puppy and its parents.
5. Dogs with physically apparent genetic abnormalities are not bred to dogs with similar abnormalities.
6. Dogs with known internal genetic abnormalities are removed from the breeding program.
7. As confirmed by the veterinarian, dogs with conformation traits that negatively affect their quality of life are not bred.
8. Remove animals from the breeding program that are not able to see or breathe normally, are not physically fit or able to run freely, and are not able to give birth to viable offspring.¹²
9. Dogs that display undesirable behavioural traits such as excessive fear, overt shyness, or inappropriate aggression, are not used for breeding.

RECOMMENDED PRACTICES

- a. Spay or neuter animals removed from the breeding program, including dogs that carry inherited diseases or have conformation traits which prevent normal functions or negatively impact quality of life.
- b. Ensure prospective new owners learn about inherited diseases common to the breed they are considering.
- c. Consult with a specialist in an area of genetically derived diseases in order to eliminate or decrease genetic defects.

4.1.2 Soundness

The physical and mental well-being of both the sire and dam are essential for the production of healthy offspring. It is important that the sire and dam are in good overall health. This includes, but is not limited to, a healthy appetite, a good body condition score, normal stool, and being free of infectious disease. They are alert, responsive, and eager to engage in activities typical of their breed. Prior to breeding, evaluate dogs for soundness in partnership with a veterinarian.

Pre-breeding soundness evaluations are a great opportunity for veterinarians and breeders to develop a team-based approach in deciding which dogs are best suited to a breeding program based on their temperament, behaviour, genetic makeup, and overall health. It also enables the team to eliminate dogs from the breeding program which have physical flaws, genetic flaws, or negative mental states that pose a risk to public safety or impair the dog's ability to integrate into a breeding program and be socially well-adapted.

¹² The Breed Watch Booklet, available from the UK Kennel Club, is a useful tool for promoting pedigree dog health: http://www.thekennelclub.org.uk/media/341575/breed_watch_booklet.pdf



In order to have an adequate history of a breeding dog's soundness, it is important that all veterinary medical records, registration papers, and collected and/or stored samples, are properly identified for each dog. Physical description, tattoos, microchips, unique identifying features, complete registered name, as well as commonly used name are important identifiers.

Reproductive History

A complete review of the dog's overall health and reproductive history is important for evaluating a dog for soundness before entering a breeding program. A complete review includes:

- Assess duration, frequency, and dates of previous heat cycles for the dam.
- Review previous breeding experience and outcomes. This includes matings, litters born, and number of pups per litter, prior surgical interventions, viability of offspring, genetic or congenital disease in offspring, and changes in libido over time.
 - Note whether the animals were receptive when trying to mate and, if so, what signs they were showing. This includes flagging, mounting, play bowing, licking and sniffing genital area, and correct positioning when mounting.
- Review prior use of reproduction specific drug therapy or other drugs.
- Consider previous negative sexual experiences. This includes pain while mating due to underlying disease or injury associated with the penis, prostate, back, or limbs.
- Consider if dogs have been punished previously for showing sexual interest, such as mounting. These dogs may be reluctant to breed in the presence of those animals and/or the humans who punished them.
- Consider, if animals were bred naturally or via artificial insemination. Note what methods of sample collection and insemination were used.



- Assess the health of the dog, including any previous/current illness or injury that could affect reproduction. This includes results of previously performed diagnostic tests and status of vaccination, deworming, and heartworm treatment.

Physical Examination

A veterinary examination for breeding soundness will help identify dogs that are good candidates for a breeding program. This will also aid in identifying dogs that are not suitable for breeding at the time of the examination.

As part of a breeding soundness examination, a veterinarian can:

- Evaluate the animal's gait when entering the examination room and for signs of skeletal abnormalities.
- Look at, listen to, and feel the entire animal, paying particular attention to characteristics known to be inherited.
- Perform a philological of temperament, fear, aggression, anxiety.
- Assess the uterus, vulva, vagina, and mammary glands (for females). These areas are assessed for size, shape, symmetry, and placement, and presence of abnormal growths or appearance, discharge, or pain.
- Assess the penis, penile sheath, testicles, and prostate (for males). These areas are assessed for size, shape, symmetry, and placement, and presence of abnormal growths or appearance, discharge, or pain.
- Perform blood tests to evaluate overall health, to monitor for infectious disease such as *Brucella canis*, or to monitor hormone levels such as progesterone, estradiol, or thyroid.
- Examine X-rays, ultrasounds and endoscopy results to evaluate internal structures that cannot be readily evaluated by sight, sound, or feel.
- Obtain semen samples to determine sperm counts, anatomy, and viability.
- Obtain urine samples to evaluate for underlying inflammation, infection, or other diseases that could negatively affect reproductive success.

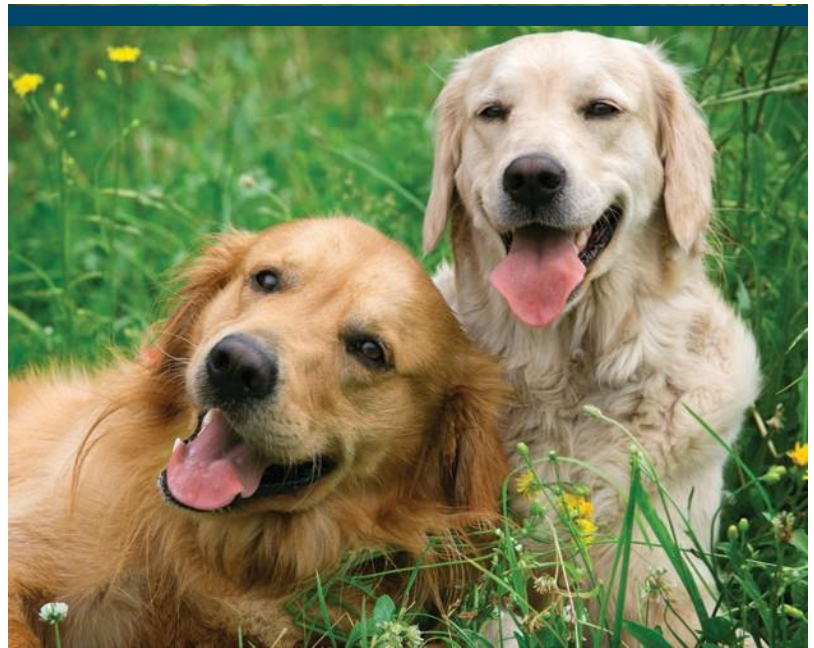
Reproductive Career

When to start breeding a dog will vary depending on the breed, age, and stage of sexual maturity. Small breed dogs are usually bred starting at the second heat cycle. Large and giant breed dogs tend to cycle less frequently than small breed dogs and may be bred on the first heat cycle if it occurs at two years of age or older.

The acceptable frequency and total number of times an animal is bred depends on the physical, mental, and reproductive health of the animal. The dog's reproductive history in regard to sperm production, conception rates, and ease of whelping will influence the recommended frequency and duration of breeding. Animals which exhibit reproductive complications at a young age can have persistent and/or worsening complications as they age. The male can be used for breeding as long as he is capable of ejaculation, has normal sperm production, and does not have underlying illness or injury that causes discomfort during breeding. Sperm counts will naturally decrease with age and make the likelihood of successful fertilization decrease with time. It will take about four

months from the female's last heat cycle for the uterine lining to normalize and be able to support pregnancy. The numbers of eggs released with each heat cycle diminishes with age, decreasing the rate of conception with time. Younger dogs are generally more fertile and have less difficulties with pregnancy.

When to retire dogs from breeding will vary depending on breed, age, and overall health status. Any dogs that develop illness or injury that causes pain or discomfort when breeding, or develop signs of diseases that are transmissible to any other dogs, are no longer suitable candidates for a breeding program. Males are generally ready to retire at 10 to



12 years of age, or sooner if sperm counts decrease or reproductive success continually decreases with age. Female dogs are generally ready to retire at eight years of age and large breed dogs at six years of age. As females age there is an increased risk of obstetric complications (i.e., unable to give birth naturally, uterus twisting, retained puppies and placentas, mammary/uterine infections). Female dogs do not experience menopause so they can have heat cycles their entire life; these cycles may occur with less frequency as the female ages.

Infectious Diseases that Affect Soundness

Brucellosis is an infectious disease that can be carried by both male and female dogs. Infectious animals are identified by a blood test. Certain strains of *B. canis* can be transmitted to humans, and is a reportable disease in Canada. This means that anyone who suspects that an animal has brucellosis must immediately notify a CFIA veterinarian. Brucellosis negatively impacts both male and female fertility and overall health. Responsible breeding practices include consulting with a veterinarian about testing all new dogs for brucellosis which are being considered for a breeding program, yearly screening of dogs being bred, and eliminating those which test positive. If a positive test is found in a resident dog, all other dogs in the kennel are to be tested and dogs which have recently left the kennel are also located and tested.

Canine herpes virus (CHV) causes an infectious disease of the reproductive tract that can be carried by both the male and female. The virus is identified through a blood test. This virus can cause a 100% death rate in affected litters and death can occur within a 24-hour period. It is often too late to save a puppy once clinical signs are apparent. In litters of newborn puppies that experience high rates of illness and death, responsible breeding practices include consulting with a veterinarian about testing the sire, dam, and offspring for this virus, treating sick puppies, and reviewing the breeding program to prevent future similar incidents.

REQUIREMENTS

1. Before introducing a dog to a breeding program, consult with a veterinarian to identify genetic abnormalities known to be inherent to the breed, and test for those abnormalities appropriately.
2. Before entering a breeding program, dogs are determined by a veterinarian to be sound for breeding.
3. Dams are not bred before their second estrous cycle or 18 months of age, whichever comes first, or as otherwise recommended by a veterinarian.
4. Dogs that are affected by disease or injury causing pain while breeding are removed from the breeding program until such time as the issues are resolved.
5. Dogs showing clinical signs of infectious and/or zoonotic disease are removed from the breeding program until such time as they are deemed healthy by a veterinarian.
6. Dogs that are not socially well-adapted resulting in a threat to public or animal safety, or display a psychological aversion to breeding, are removed from the breeding program.
7. The frequency of breeding, total number of breedings, and age to retire animals from breeding, are determined in consultation with a veterinarian.

RECOMMENDED PRACTICES

- a. Keep records of occurrence of heat cycles.
- b. Test breeding dogs and offspring as recommended by a veterinarian for infectious disease that negatively affects reproductive success including brucellosis (*B. canis*) and canine herpes virus infection (CHV).
- c. When considering a new dog for a breeding program, collect as much historical breeding and overall health information about the dog as possible.
- d. Properly document and identify all breeding animals as well as their records and samples.

4.2 Handling, Restraint, and Grooming

Kennel caregivers can train dogs to enjoy handling and be at ease with restraint through positive reinforcement. The approach taken may differ based on the dog's experiences and reaction to handling and may involve conditioning, counter-conditioning, and desensitization. The best method of handling provides the least restraint required to allow the specific procedure(s) to be performed properly. It will minimize fear, pain, stress, and suffering for the animal, and protect both the dog and personnel from harm. Handling and restraining in a confrontational or forceful manner can lead to serious physical and



psychological consequences for dogs. The physical limitations placed on an animal can transform the animal's experience of stress into distress.

Grooming is necessary for all dog breeds. Grooming can include coat maintenance, ear care, maintenance of the hair and skin around the eyes, and nail trimming.

The type of coat grooming required is dependent on the breed. The use of positive reinforcement will allow dogs to be at ease while being brushed, bathed, and dried. When coat care is ignored, dogs can develop mats close to their skin, resulting in continuous pain and at times, open wounds. Caregiver training is crucial for using appropriate grooming tools and methods depending on the coat type. Grooming tools need to be maintained in good working order.

Since dogs and puppies experience continual nail growth, they will need to have their nails trimmed to an appropriate length during their entire lives. Breeders who use positive reinforcement to train puppies to be at ease with nail trimming set them up for success in their adult life. If a dog's nails are not trimmed, the quick, or blood supply, of the nail will become too long. This leads to increased pain and bleeding when the nails are trimmed. Additionally, dogs can have difficulty walking and are more susceptible to toe injuries. Dogs who have not had their paws and nails handled as puppies may become fearful and aggressive when their paws and nails are handled as adults.

REQUIREMENTS

1. Use positive-reinforcement methods for routine handling and restraint.
2. The method of handling provides the least restraint required to allow the specific procedure(s) to be performed properly. It will minimize fear, pain, stress, and suffering for the animal, and protect both the dog and personnel from harm.
3. Provide regular breed-appropriate grooming, preventing matting and related skin injury.
4. Personnel are adequately trained to handle and groom the dogs.
5. Grooming tools are maintained in good working order and are regularly sanitized in keeping with health management and infectious disease control protocols.
6. Trim nails as required to prevent them from becoming overgrown.

RECOMMENDED PRACTICES

- a. Familiarize dogs with handling and grooming procedures from a young age.

4.3 Puppy and Dog Placement

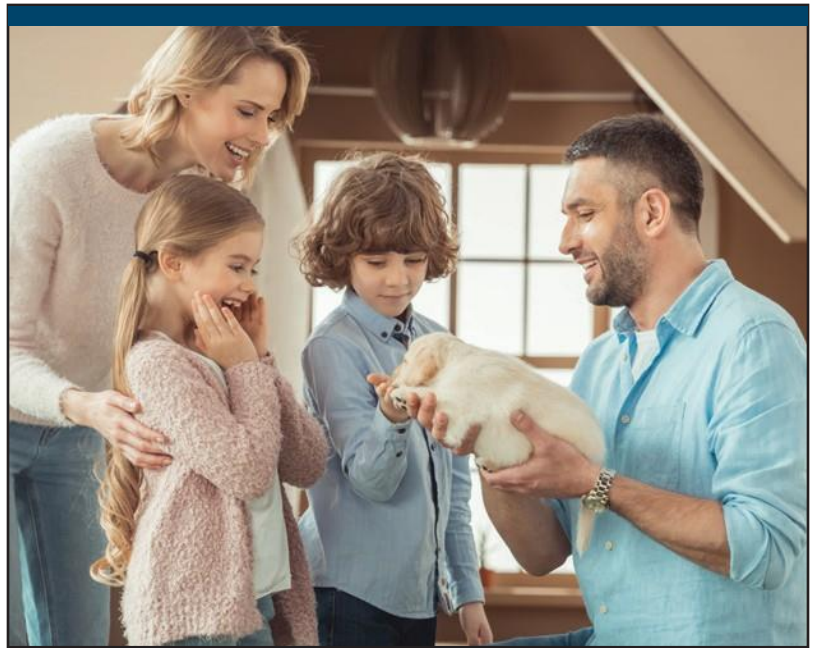
Reputable breeders will make it easy for interested buyers to contact the seller and locate the breeding premises for viewing the dogs.

Reputable kennel operators will provide new owners with documentation describing the conditions of sale and care provided to the animal. Signed contracts of sale or agreements describe the animal sold, existing

guarantees or warranties, sales receipts, and return/refund policies. Responsible breeders will also provide documentation of medical history for the animal including preventive health care, future medical needs, diagnosed/treated illness/injury, and diagnosed/prevalent genetic disorders.

Information within these documents includes:

- Name, address, phone contact, and email address of breeder and purchaser;
- Physical description of animal purchased (i.e., breed, age, gender, colour, name, permanent ID, unique markings);
- Cost of purchase and dated receipt to acknowledge payment;
- At what age to spay/neuter the animal if the breeder does not want the animal to reproduce;
- Any previously diagnosed illness, injury, or inherited disorders; including any veterinary medical records or test results to support these diagnoses;
- Veterinary preventive care to date including veterinary examinations, vaccinations, parasite treatments, ongoing booster vaccines, and follow-up deworming, including any veterinary medical records to support these treatments; and



A clearly defined return/refund/exchange policy.

- The return/refund/exchange policies include the following information:
- The new owner agrees to have the dog examined by a veterinarian within a set period of time. Take into account that many diseases have an incubation time of two weeks before the dog starts to show clinical signs;
- A fixed time period during which the new owner may return the dog. Reasons for return include, but are not limited to, hereditary/congenital diseases, incubating illnesses, as well as injuries present before sale;
- The details of what veterinary documentation is required to support a diagnosis for application of the return policy;
- A clear policy regarding the return of the animal due to behavioural concerns or other reasons not related to the physical health of the animal. These may include, but are not limited to, incompatibility with other animals/humans and changes in owner’s ability to provide the dog with a good quality of life; and
- Precise details as to whether the policy includes a full or partial monetary refund and/or exchange for a new dog.



Dogs sold as pets are often accompanied by a non-breeding contract, which is a binding agreement that does not allow the dog to be bred. There are health benefits to having dogs spayed or neutered and it may also prevent certain behavioural problems.

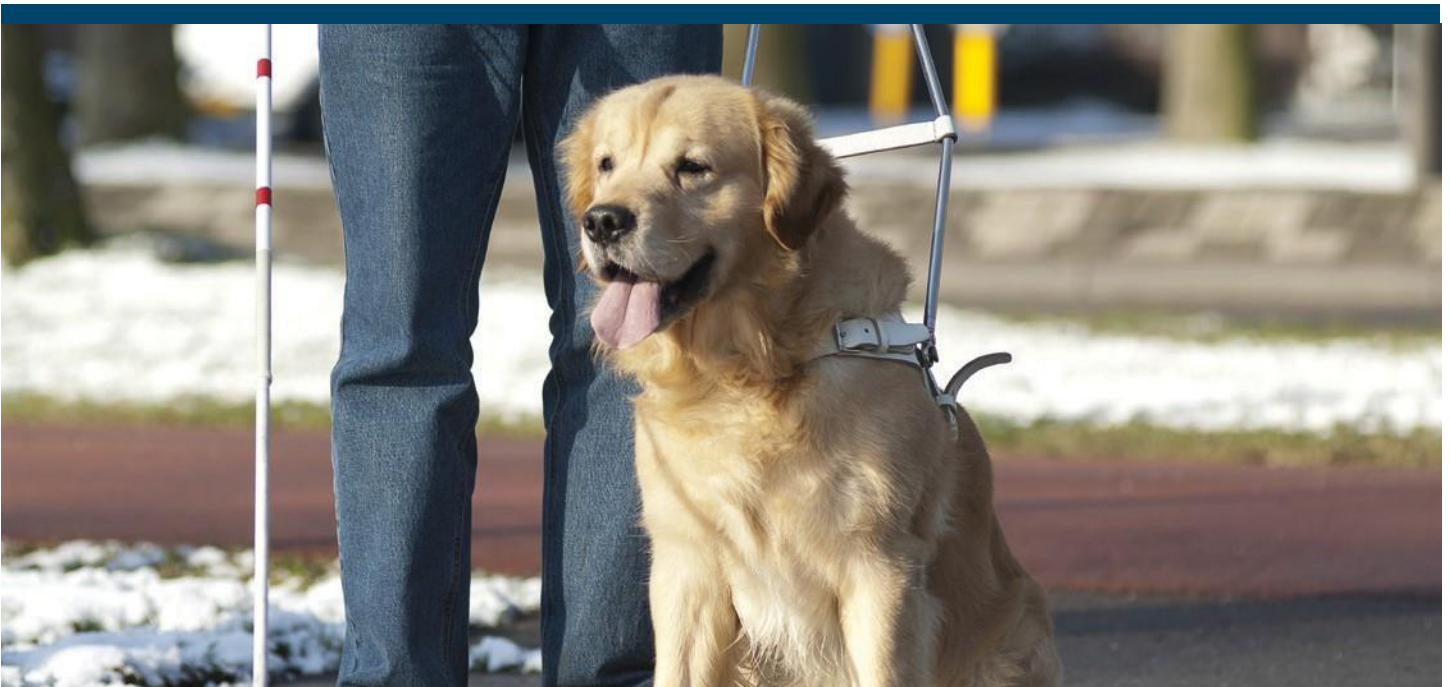
REQUIREMENTS

1. Puppies considered for sale are fully weaned and eating independently and are at least eight weeks of age before being given to their new owner, unless otherwise directed by a veterinarian.
2. Any puppies or adult dogs considered for sale are healthy, bright, alert, and sociable.
3. Any exchange of ownership includes a written agreement. This agreement includes unique identifiers of the new owner, the former owner, the dog, and a date and the terms of the exchange of ownership.
4. Dogs are engaged in a veterinary-directed healthcare program before exchange of ownership. This ensures dogs are up-to-date on vaccinations and parasite treatments.
5. Provide documentation on the health care and medical history of the dog to the new owner, and the care required.
6. Before sale, disclose any known history of conformation traits within the family line that prevent normal function or negatively impact the quality of life, any cosmetic alterations, and any behaviour concerns.

RECOMMENDED PRACTICES

- a. Determine the prospective buyer's ability to provide the dog with care appropriate to its needs including:
 - i. verification that they are 18 years of age or older;
 - ii. the ability to keep the animal at their residence (request landlord's written permission and contact information if renting);
 - iii. ensuring the dog can be kept safe when outdoors and protected from inclement weather;
 - iv. the ability to afford cost of care for basic necessities (food, housing), preventive health care, and unforeseen illness/injury;
 - v. allergy considerations;
 - vi. the ability to provide appropriate socialization, exercise, and training; and
 - vii. the ability to provide references upon request.
- b. Provide the written contract to prospective buyers in advance of the exchange of ownership.
- c. Provide information on common inherited diseases to prospective buyers.
- d. Allow prospective new owners to interact with the dog in a familiar environment where it was raised, with its littermates and its parents when possible. Take into consideration appropriate measures to keep humans and dogs safe from exposure to infectious disease or injury.
- e. Where a heritable disease is recognized in a breed and where a screening process or a test exists for this disease, disclose and provide written documentation of test results to prospective new owners for the dog as well as the dog's parents. If no testing was performed, disclose this to the prospective new owner.
- f. Provide written documentation to the purchaser on the care received to date and ongoing care required for the dog, including:

- i. **Diet** - type, volume, frequency to be fed, and how to gradually introduce new diets. Breeders supply a week's worth of the animal's current diet to ensure a gradual diet change to minimize the risk of digestive upset;
 - ii. **Grooming** - nail trimming, fur clipping, bathing, brushing, ear cleaning, and dental care;
 - iii. **Socialization and behavioural characteristic for the age and breed of dog** - exercise, play, training, and interaction between dogs and other animals including humans;
 - iv. **Housing** - appropriate shelter if housed outdoors, kennel training if housed indoors or travelling;
 - v. **Spaying and neutering** - recommended if animals are not intended for a breeding program or have undesirable genetic or behavioural traits; and
 - vi. Upcoming **vaccine and parasite treatments** as directed by the veterinarian.
- g. Monitor the health of the purchased dogs and note problems that occur in connection with the lineage.
 - h. Accept return of dogs from purchasers who are no longer able or willing to care for the dog.



4.4 Considerations for Working Dogs

A working dog is kept primarily for activities that include, but are not limited to, scent detection, service and human assistance, livestock protection, breeding, sled-pulling, hunting, wildlife control, person and property protection, and performance. Service dogs are dogs which are trained and bred to assist persons with physical and/or mental challenges including post-traumatic stress disorder (PTSD), autism, limited mobility, and diabetes, or seizure detection. Guide dogs refer specifically to those dogs which are trained to work with the blind. Some working dogs are kept as pets in a home while others are kept outdoors.

Some dogs are more appropriate for certain types of work. This is based on a thorough evaluation of the dog's conformation, temperament, and willingness to learn and perform specific tasks. Positive training methods with suitable dogs will result in the best working dog for the job. As with all dogs, working dogs require appropriate living conditions including suitable housing, sufficient exercise, and appropriate rest/play periods. The end goal is to produce a working dog that enjoys performing their job because they truly like the work, have a good working bond with their trainer and/or handler, and are not suffering from physical or psychological stress.

When specialized equipment is required for the dog to be able to perform their job it is important that it is well-fitted and made so the dog is comfortable and will not suffer an injury from the equipment. Avoid having dogs carry or move an object beyond their physical capabilities.

REQUIREMENTS

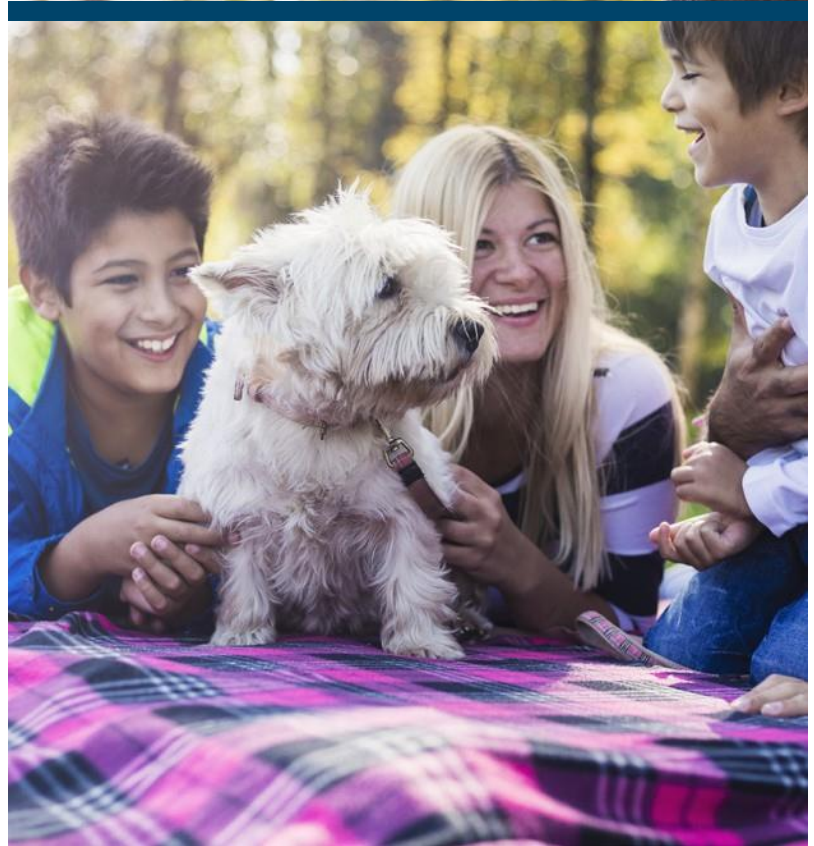
1. Working dogs are selected for work based on their breed, including the appropriate conformation and temperament for the specific work they will be engaged in.
 2. The work that dogs are engaged in is appropriate for the physical capabilities of the dog.
 3. Dogs work willingly and within their capabilities and conditioning. They are given appropriate rest and play periods.
 4. Dogs are housed in such a way as to allow them to display natural behaviours, to socialize with or without other species of animals and humans, as appropriate, and to protect public safety.
 5. Performance-enhancing drugs are not used unless prescribed by a veterinarian to improve the quality of life for the dog.
 6. Handlers assess working dogs for weight loss, hydration, injury, behaviour, attitude, and willingness to work.
 7. Work-related weight loss, illness, or injuries are immediately addressed and appropriately treated.
 8. Positive-reinforcement training methods are used.
 9. Dogs are eager to work and do not suffer from distress when engaged in their work.
 10. Appropriate measures are taken to protect dogs from illness or injury due to inclement weather and extremes in temperature including dehydration, frostbite, hypothermia, and hyperthermia.
 11. Dogs are provided with protective equipment appropriate for the conditions they will be working in.
 12. Equipment worn on the dogs such as footwear, harnesses, or collars are properly fitted and constructed to ensure comfort and prevent injury.
-

RECOMMENDED PRACTICES

- a. Perform veterinary evaluation of the dog to determine their physical and behavioural suitability for the work.

4.5 Aging and Retirement

When operating a breeding kennel, it is important to recognize that as dogs age special issues will arise including end-of-life decisions. A geriatric dog may no longer be suited for their designated purpose. At this point, it is important for kennel operators to decide whether to keep the dog in the kennel for the remainder of its life, or if it is better to rehome the dog. When a dog shows signs of aging depends on various factors including their breed, size, activity level, and amount of work they have performed over time. Signs of aging may include, but are not limited to, a decreased energy level or willingness to play/exercise, changes in female heat patterns including frequency of heat cycles and duration/volume of bleeding with each cycle, decreased ability to see/hear, decreased mobility, development of growths on the body, or changes in thirst/appetite/weight.



If an aging dog is kept in the kennel, the facility has a responsibility to determine the resources and commitment to provide the dog with the special care it may need to provide a good quality of life as it ages.

Aging working dogs may be well-suited to be rehomed where they can act as mentors for training puppies and young adult dogs. A retired breeding dog may be well-suited for a new home as a family pet, considering whether prospective new owners are aware of and well-suited to the inherent breed characteristics and unique personality traits of the dog. When rehoming an aging dog, care and scrutiny is used in finding a suitable home. Animal rescues or shelters can be a resource to help find placement for retired dogs in new homes. A dog that has been well-socialized and cared for over time will have the best chance to be successfully placed in a new home. Responsible breeders will neuter dogs before placement in their new home.

Housing Considerations for Aging Dogs

Older dogs may not cope well with sudden changes in their housing environment. Gradual transition to a new home environment is important, especially if the new environment differs radically from their existing living conditions. For example, dogs who live primarily outdoors, or are accustomed to a specific confinement method will need time to adapt to an indoor home. Gradual transition includes introducing the dog to the new environment for short visits and gradually increasing the amount of time the dog spends in the environment until they are comfortable with their new setting.

As dogs age, they often become less tolerant of weather extremes and hard surfaces. They may require additional bedding and/or insulation for outdoor shelters, they may need to be transitioned to indoor housing, or they may require additional options to access shade and drinking water.

Feeding Considerations for Aging Dogs

As an aging dog's metabolic rate and general activity level decreases, they may require fewer daily calories. Adjustments in diet and caloric intake may be necessary in order to prevent obesity. Obesity is a common cause of serious health problems in dogs, including kidney and liver disease, diabetes, and arthritis. Sudden changes in weight need to be monitored and corrected. Consult a veterinarian if dogs are gaining or losing weight inappropriately.

Health Issues of Aging Dogs

As dogs age they lose muscle mass and strength and are more prone to arthritis. Providing daily exercise and play appropriate for each dog will help maintain flexibility, mobility, and mental soundness. Vaccination requirements and deworming schedules may change as discussed with the veterinarian. Immune systems become less adept, making older dogs more susceptible to infections. Some metabolic diseases are more common in older dogs. Many diseases associated with aging can be easily diagnosed and treated to provide comfort and quality of life in a dog's senior years.

Be especially alert for any of the following signs of disease in aging animals and bring them to the attention of a veterinarian:

- Ongoing significant increase in water consumption or urination;
- Weight loss or weight gain;
- Significant decreased appetite or failure to eat for more than two days in a row;
- Significant increase in appetite;
- Repeated vomiting;
- Diarrhea that lasts longer than two days, changes in stool consistency, colour, and frequency;
- Lameness that lasts longer than three to four days;
- Lumps or masses in or under the skin;
- Open sores or multiple scabs on the skin, especially if they seem to be growing or spreading to other parts of the body;
- Hair loss, especially if accompanied by scratching;
- Persistent coughing or gagging;
- Excessive panting;
- Sudden collapse or weakness;
- Difficulty chewing or swallowing food;
- Seizures, convulsions; and
- Changes in behaviour.

REQUIREMENTS

1. Screen prospective new owners of aging dogs for compatibility and ability to provide for the dog's physical, medical, and behavioural needs.
2. Provide additional shelter, bedding, and insulation for aging outdoor dogs as required. Indoor housing is to be provided for outdoor dogs who no longer tolerate outdoor housing.
3. Adjust feed and water regimens as required to maintain appropriate body condition; to compensate for a decreasing metabolic rate, general decreased activity level, and development of age-related disease.

RECOMMENDED PRACTICES

- a. Euthanasia is not used as a means of population control for healthy, rehomingable dogs.
- b. Take responsibility for rehoming retired dogs and avoid relying on animal rescues or shelters for rehoming.
- c. If aging dogs are going to be re-homed in an environment different from what they are accustomed to, make the transition from the current to the new housing environment gradual.
- d. Consider placing retired working or sport dogs in new homes in which the dogs can mentor younger dogs and/or people learning the work or sport.
- e. Spay or neuter retired dogs before placing them in new homes.



Section 5

Transport

Most dogs will travel multiple times in their lives regardless of whether their primary purpose is for sport, work, or companionship. Means of transport include motorized or self-propelled vehicles such as bicycles, motor vehicles, planes, trains, boats, or ships. It is important for dogs to be transported in a manner that ensures the safety, security, health, and welfare of the animals, and public safety.

Transport can cause stress in dogs. Stress is the physical and psychological response that a dog can display when placed in a physically uncomfortable environment or new situation. Transportation stressors include inadequate ventilation, extreme temperature shifts, insects and rodents, hunger, thirst, and lack of break times during transport to exercise or urinate/defecate.¹³ Other stressors include new restraint methods, unfamiliar environmental factors such as noises, odours, humans, and surfaces. Improper handling by personnel inadequately trained on the humane restraint/handling of dogs is also a source of stress. Stressed dogs can display physical abnormalities including, rapid breathing or panting, increased heart rate, and lack of appetite and lethargy. They can become nauseated or lose bladder or bowel control. Stress-related behaviours can be displayed as aggression, growling, persistent barking and whining, digging, chewing, excessive grooming, hyperactivity, and shaking.



13 Stress Factors for Dogs http://www.ctsanimals.ca/va2020/com/assets/data/pdf/kennel/needToKnow7d_20.pdf

Conditioning of dogs to transportation in vehicles will reduce the likelihood of adverse reactions to travel. It is important to ensure dogs have positive travel experiences starting at a young age. It is beneficial to condition dogs to riding in both motor vehicles and in transport kennels, as they are the most common modes of transportation for dogs.

The Transportation of Animals section of the *Health of Animals Regulations* provides legislative requirements for transporting dogs. Certain provinces also have transportation requirements. For more information on motor vehicle transport, see the Transportation of Cats and Dogs position statement from the CVMA.¹⁴

Pre-planning is essential to ensure the welfare of dogs during transportation. It is important before the journey starts to ensure proper health and that import/export documents are completed. Ensure travel containers are appropriate for the animal and are in good repair. If the dog is to be exposed to the outdoors, assess weather conditions before transport. Determine the fastest and safest route, and provide advanced notification to the individuals accepting the animal at its destination. International Air Transport Association (IATA) Live Animal Regulations (LAR) is the airline industry standard for transporting animals.¹⁵

Many organizations such as the AVMA and IATA strongly discourage the use of tranquilization or sedation during transport. Such practices are counterproductive to safe humane transport. They may cause the animal to lose voluntary control of its body which results in increased risk of injury due to falling or choking, or soiling themselves due to accidental urination or defecation. They may also lose the ability to regulate their body temperature adequately. Some airlines will not allow an animal to be transported if sedated.

Ill, injured, pregnant, immature, or elderly dogs benefit from added attention when being transported. These animals can be more easily stressed, less able to cope with stress associated with travel, and therefore more prone to illness or injury as a result of travel. Transporting similar animals within each of these categories, with other animals they are familiar and compatible with, may decrease stress during transport. Be mindful that normally compatible animals may become aggressive with each other as a result of stress associated with transport.

14 <https://www.canadianveterinarians.net/documents/transportation-of-dogs-and-cats-position-statement>

15 Transportation Position Statement: International Air Transport Association
<http://www.iata.org/whatwedo/cargo/live-animals/Pages/index.aspx>
<http://www.iata.org/whatwedo/cargo/live-animals/pets/Pages/index.aspx>

REQUIREMENTS

1. Personnel transporting dogs have adequate training and experience to maintain and ensure the health and well-being of the dogs throughout all stages of transport.
2. Weather conditions are assessed before transport to prevent possible harm to the animal from excessive wind, rain, snow, heat, or cold.
3. When injured, pregnant, or ill dogs are transported for medical reasons, they are kennelled separately from other dogs to prevent injury and spread of disease. When dogs in such conditions need to be transported for any reason other than medical, fitness for transport should be determined by a veterinarian.
4. Nursing puppies are transported separately from other dogs but with their dam, and are not mixed with puppies that are not part of the same litter. Care is taken to ensure the puppies are not accidentally injured by the dam during transportation.
5. Before transport, dogs are conditioned to their container to learn to associate it with comfort and security.
6. Containers for all sizes of dogs meet the requirements of the Live Animal Regulations of the IATA.
7. Each container is clean, in good condition, is free of mechanical defects, is leak-proof, and contains absorbent bedding. Placement and construction of containers allow for visibility of the dog.
8. Each container and transport vehicle is designed to provide adequate ventilation, humidity, air pressure (if appropriate), and temperatures suitable for the health, welfare, and comfort of the animals. Temperatures may not exceed 26°C.
9. Prior to transport, ensure relevant health certificates, proof of vaccination, and import/export documents are available for review by authorities as required.
10. Dogs that exhibit aggression are kept separate from other animals.
11. Females in estrus are not transported in the same container as males.
12. Dogs are transported in areas of vehicles with adequate light and ventilation.
13. Containers holding dogs are properly secured and dogs are protected from adverse weather conditions.
14. Proper communication occurs among all personnel involved during transportation.
15. Emergency care is provided when necessary during transport.
16. All dogs transported in the same container are compatible with each other.
17. In vehicles, other than a personal motor vehicle, a thermometer is placed in the area of the transport vehicle at the level of the animals.
18. During ground transport, breaks are provided at least every four hours for at least 20 minutes and during this time dogs are provided with the opportunity to exercise, urinate, defecate, and drink water.
19. The individual nutritional needs of each dog are met during transport.
20. IATA standards are followed during air transport.
21. If a dog is being transported to a foreign country, vaccination and health certification are in compliance with the importing country's regulations, as required by law. Health certificates are issued to meet current airline requirements if the dog is being transported by air.
22. Dogs transported by exposed or open vehicles such as motorcycles, pickup trucks, or flatbed trucks are secured with a proper restraining device or in a closed container.

RECOMMENDED PRACTICES

- a. Before transport, handle dogs regularly to facilitate restraint and ensure socialization.
- b. Vaccinate dogs at least two weeks before shipping in order to avoid extra stress related to vaccination and to develop a good immune response.
- c. Document and make administered medication accessible to transport personnel before or during transport. For medication used to relieve animal stress or anxiety during transport, administer a monitored test-dose at least one week before transport to ensure the animal does not experience any adverse reactions.
- d. The size of containers prevents excessive movement and risk of injury due to sudden movement.
- e. Individual transport carriers are labelled to include the name of the animal, emergency human contact information in the event the animal's transport is delayed or they are lost, any special medical considerations, and caution if the animal is known to be aggressive.
- f. If a container is not used, secure the dog with a safety harness. Note that only some safety harnesses are crash-tested.
- g. Secure dogs in a well-ventilated container if being transported in the open backs of vehicles.
- h. Transport dogs by the fastest route possible.
- i. Transport containers are not stacked.
- j. Any vehicle or container used for transport:
 - i. protects the dogs from injuries;
 - ii. has non-slip floors;
 - iii. provides easy access to animals;
 - iv. is designed to maximize operator safety;
 - v. protects against escape or accidental release of animals;
 - vi. is easy to clean and disinfect;
 - vii. is properly ventilated to avoid dampness, draughts, and contamination by exhaust emissions;
 - viii. maintains a comfortable temperature and humidity; and
 - ix. is equipped with collars, harnesses, and leashes that are easily accessible; when walked, the dog is doubled-leashed to avoid escape.



Section 6

End of Life Considerations and Euthanasia

6.1 End of Life Considerations

Injury and illness can threaten a dog's quality of life. Whether a dog is in the prime of its life or debilitated due to diseases associated with aging, a veterinarian can greatly assist in assessing the dog's quality of life. Questions to consider with regard to euthanasia include:

- How likely is the dog to recover from illness or injury?
- Is the dog in pain? If yes, can the pain be effectively controlled?
- Is the dog able to eat and drink enough to maintain an acceptable body weight and avoid dehydration?
- Is the dog mobile enough to perform daily activities comfortably?
- Do vision or hearing impairments pose a significant risk to compromise dog safety and/or quality of life?
- Is the dog able to breathe without difficulty?
- Does the dog behave as though it enjoys life?
- Is the dog showing any signs of declining mental (cognitive) function including decreased interaction with humans, loss of bladder or bowel control, changes in wake or sleep patterns, changes in vocalization, loss of recognition of familiar humans or animals?
- Can caregivers provide the dog with specialized care required to maintain a good quality of life?
- Is timely veterinary care available in the area?
- Is the cost of the required veterinary care affordable?

Euthanasia has important emotional impacts on kennel staff as well as animal owners. It is important that adequate emotional and psychological support is provided when considering euthanasia, and following the euthanasia of any animal.

6.2 Euthanasia

Veterinarians are governed by their provincial licensing bodies with respect to euthanasia and the proper disposition of an animal's remains. In some provinces local legislation also applies to veterinary technicians under the supervision of a veterinarian. The preferred method for dog euthanasia is pre-sedation followed by the intravenous injection of a concentrated barbiturate by a veterinarian.

The Canadian Veterinary Medical Association (CVMA) Euthanasia Position Statement, the Canadian Veterinary Journal Guidelines for Euthanasia of Domestic Animals by Firearms, and the American Veterinary Medical Association (AVMA) Guidelines for the Euthanasia of Animals, reference appropriate euthanasia methods for dogs. These documents may be enforceable under local provincial animal welfare legislation.

It is important that euthanasia be performed in such a way that death is as painless and free from fear or distress as possible. Experience, training, sensitivity, and compassion are important when considering whether a person is competent to assist with or perform euthanasia.

In isolated areas or emergency situations a dog may have to be euthanized by someone other than a veterinarian. Important considerations regarding euthanasia include appropriate handling and restraint of the animal to be euthanized, sufficient knowledge and experience in performing euthanasia, and the safety of other animals and persons at the time of euthanasia. If euthanasia of animals is performed with the use of firearms, it is important for the person performing euthanasia



to be legally allowed to use firearms, and be adequately trained in euthanasia by firearms. Considering dogs are social, it is best if they are euthanized away from other dogs.

It is important to confirm that the animal is deceased at the time of euthanasia before leaving or disposing of the animal. Physical characteristics that can be used to confirm death include:

- Lack of respiration and heart beat for a duration of five minutes;
- Lack of corneal reflex; touch the surface of the eye and note if the dog blinks. There should be no eye movement or blinking when touched;
- Dilated pupils, eye surface becomes dry to the touch;
- Observable lowering of body temperature with time; and
- Change in the colour of mucous membranes (gums) - with death, the gums generally lose their natural pink color and become white or bluish.

6.3 Disposition of Remains

Local or provincial laws may determine requirements for acceptable disposition of remains of deceased animals. A veterinarian or animal shelter can discuss options for cremating deceased animals.

If laws permit, and the owner wishes to bury a deceased dog, burying the animal deep enough, with appropriate soil cover, and away from water sources, will minimize the risk of the remains being scavenged and the environment being contaminated. This is especially important if the animal is euthanized by a veterinarian using injectable drugs, as these drugs have the potential to cause serious illness or death in the animals that scavenge that body, and these drugs can leach into the environment.

If animal remains cannot be properly disposed of immediately, an appropriate storage facility such as a secured freezer onsite can prevent carcass spoilage and scavenging.

REQUIREMENTS

1. Decisions regarding euthanasia are conducted according to a plan developed in advance with a veterinarian.
 2. Personnel assisting with euthanasia are adequately trained in proper handling, restraint, euthanasia, and disposal procedures.
 3. A dog is euthanized without delay if a veterinarian has determined that illness or injury, including mental or physical impairment, cannot be reversed to the point where the dog will be able to return to a good quality of life.
 4. Euthanasia is performed by a veterinarian or under veterinary supervision as determined by provincial legislation. If situations prevent a veterinarian from performing euthanasia in a timely fashion (i.e., inclement weather, geographic location, sudden or rapidly progressing medical condition), euthanasia by firearms is acceptable if performed in accordance with requirement 6 (below) by appropriately trained personnel.
 5. The Canadian Veterinary Medical Association (CVMA) Euthanasia Position Statement, the CVMA Guidelines for Euthanasia of Domestic Animals by Firearms, and the American Veterinary Medical Association (AVMA) euthanasia guidelines are followed with regard to appropriate euthanasia methods for dogs. These documents may be enforceable under local provincial animal welfare legislation.
 6. The method used for euthanasia:
 - i. renders dogs irreversibly unconscious as rapidly as possible with the least possible pain, fear, and anxiety;
 - ii. produces minimal undesirable physiologic and psychological effects on the dog being euthanized, and on the humans and animals in their immediate vicinity;
 - iii. is safe and produces minimal stress for the operator and any assistants or observers; and
 - iv. has a minimal ecological impact.
 7. The person performing the euthanasia confirms the dog is deceased.
 8. Disposition of animal remains complies with local legislation.
 9. The handling of deceased animals has minimal impact on the environment and other animals. If an animal's remains are buried or cremated, it is done in such a way that minimizes risk of soil contamination, water contamination, and scavenging.
 10. If animal remains cannot be properly disposed of immediately, an appropriate storage facility such as a secured freezer is available onsite, to prevent carcass spoilage and scavenging.
-

RECOMMENDED PRACTICES

- a. Euthanize dogs by a veterinarian using a barbiturate overdose with prior sedation.
- b. Perform euthanasia out of sight and sound of other animals.
- c. Use a service that collects and/or incinerates deceased animals in areas serviced by animal disposal companies.
- d. If deceased animals are buried, the bottom of the grave is at least one metre above the seasonal high groundwater table.
- e. If deceased animals are buried for disposal, no less than one metre of packed soil covers the remains, and no less than 0.3 metres of soil crowns above ground level.
- f. Locate burial sites at least 30 metres from domestic water sources.



Bibliography

- Advisory Council on the Welfare Issues of Dog Breeding (2012, September). The advisory council breeding standards for dogs. Retrieved from: <http://www.dogadvisorycouncil.com/resources/breeding-standard-final.pdf>
- Aiello SE, ed. The Merck Veterinary Manual. 11th ed. Kenilworth, New Jersey: Merck & Co, 2016.
- American Heartworm Society (2016) Heartworm basics. Retrieved from: <https://www.heartwormsociety.org/pet-owner-resources/heartworm-basics>
- American Veterinary Medical Association. (2013) AVMA guidelines for the euthanasia of animals: 2013 edition. Retrieved from: <https://www.avma.org/KB/Policies/Documents/euthanasia.pdf>
- Associate Parliamentary Group for Animal Welfare (APGAW) (2012, July). A healthier future for pedigree dogs: Update report. Retrieved from: <https://www.cabdirect.org/cabdirect/abstract/20103023948>
- Attard E, Duncan K, Firmage T, et al. (2013) Canadian standards of care in animal shelters: Supporting ASV guidelines. Retrieved from: <https://www.canadianveterinarians.net/documents/canadian-standards-of-care-in-animal-shelters>
- Beerda B, Schilder MBH, van Hooff JARAM, de Vries HW. Manifestations of chronic and acute stress in dogs. *Appl Anim Behav Sci* 1997;52:307-319.
- Bell JS (n.d.) Improving the genetic health of your puppies. Department of Clinical Sciences, Tufts Cummings School of Veterinary Medicine. Retrieved from: http://www.wsgenetics.com/index_htm_files/ImprovingtheGeneticHealthofYourPuppies.docx
- Bell JS. Researcher responsibilities and genetic counseling for pure-bred dog populations. *Vet J* 2011;189:234-235. doi:10.1016/j.tvjl.2011.06.025.
- Bergeron R, Scott SL, Emond JP, Mercier F, Cook NJ, Schaefer AL. Physiology and behaviour of dogs during air transport. *Can Vet J* 2002;66:211-216.
- Burghardt WF. Behavioural considerations in the management of working dogs. *Vet Clin North Am Small Anim Pract* 2003;33:417-446.
- Canadian Council on Animal Care (2003) Guidelines on: Laboratory animal facilities - characteristics, design and development. Retrieved from: <http://www.ccac.ca/Documents/Standards/Guidelines/Facilities.pdf>
- Canadian Council on Animal Care (2015) Guidelines on: Training of personnel working with animals in science. Retrieved from: http://www.ccac.ca/Documents/Standards/Guidelines/CCAC_Guidelines_on_Training_of_Personnel_Working_With_Animals_in_Science.pdf
- Canadian Council on Animal Care (2017) CCAC Guidelines: Husbandry of Animals in Science. Retrieved from: <http://www.ccac.ca/Documents/Standards/Guidelines/CCAC-guidelines-on-husbandry-of-animals-in-science.pdf>
- Canadian Council on Animal Care (2017) Guide to the Care and Use of Experimental Animals, Vol. 1, 2nd ed. Retrieved from: http://www.ccac.ca/Documents/Standards/Guidelines/Experimental_Animals_Vol1.pdf
- Canadian Veterinary Medical Association (2014) Euthanasia position statement. Retrieved from: <https://www.canadianveterinarians.net/documents/euthanasia>
- Casey RA, Loftus B, Bolster C, Richards GJ, Blackwell EJ. Human directed aggression in domestic dogs (*Canis familiaris*): Occurrence in different contexts and risk factors. *Appl Anim Behav Sci* 2014;152:52-63.



- Clarke T, Cooper J, Mills D. Acculturation perceptions of breed differences in behaviour of the dog (*Canis familiaris*). *Human-Animal Interaction Bulletin* 2013;1:16-33.
- Cobb M, Branson N, McGreevy P, Lill A, Bennett P. The advent of canine performance science: Offering a sustainable future for working dogs. *Behav Processes* 2015;110:96-104.
- Collins LM, Asher L, Summers J, McGreevy P. Getting priorities straight: Risk assessment and decision-making in the improvement of inherited disorders in pedigree dogs. *Vet J* 2011;189:147-154. doi:10.1016/j.tvjl.2011.06.012.
- Coppinger R, Coppinger L. *Dogs: A New Understanding of Canine Origin, Behavior, and Evolution*. New York, New York: Scribner, 2001.
- Coppinger R, Zuccotti J. (1999) Kennel enrichment: Exercise and socialization of dogs. *J Appl Anim Wel Sci* 1999;2:281-296.
- Crook A, Dawson S, Côté E, MacDonald S, Berry J. (2011) Canine inherited disorders database. Retrieved from: <http://discoveryspace.upei.ca/cidd/>
- Diederich C, Giffroy J-M. Behavioural testing in dogs: A review of methodology in search for standardisation. *Appl Anim Behav Sci* 2006;97:51-72.
- Fraser D. *Understanding Animal Welfare: The Science in its Cultural Context*. Oxford, United Kingdom: Wiley-Blackwell, 2008.
- Gormley K, Berry J. Animal welfare position papers, puppy mills, and you. *Can Vet J*, 2009;50:1166-1168.
- Haverbeke A, Laporte B, Depiereux E, Giffroy J-M, Diederich C. Training methods of military dog handlers and their effects on the team's performances. *Appl Anim Behav Sci* 2008;113:110-122.
- Health Canada (1995). *Indoor air quality in office buildings: A technical guide*. Department of National Health and Welfare. Retrieved from: <http://publications.gc.ca/collections/Collection/H46-2-93-166Erev.pdf>
- Health of Animals Regulation. (2015) C.R.C., c. 296. SOR/97-85, s. 77. Retrieved from: http://laws-lois.justice.gc.ca/eng/regulations/C.R.C.,_c._296/page-16.html#h-70
- Herron ME, Shofer FS, Reisner IR. Survey of the use and outcome of confrontational and non-confrontational training methods in client-owned dogs showing undesired behaviors. *Appl Anim Behav Sci* 2009;117:47-54.
- Hewson CJ. What is animal welfare? Common definitions and their practical consequences. *Can Vet J* 2003;44:496-499. Retrieved from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC340178/>
- Hiby EF, Rooney NJ, Bradshaw JWS. Dog training methods: Their use, effectiveness and interaction with behaviour and welfare. *Anim Welf* 2004;13:63-69.
- HSUS (n.d.) Guidelines for the operation of an animal shelter. Retrieved from: http://www.hsi.org/assets/pdfs/eng_guidelines_operation_shelter.pdf
- Hubrecht RC. A comparison of social and environmental enrichment methods for laboratory housed dogs. *Appl Anim Behav Sci*, 1993;37:345-361.
- Hubrecht R. The welfare of dogs in human care. In: Serpell J. ed. *The Domestic Dog: Its Evolution, Behaviour, and Interactions with People*. Cambridge, UK: Cambridge University Press, 1995:179-198.
- IATA (2017) *Global standard for the transportation of live animals by air*. 43rd edition. <http://www.iata.org/publications/store/Pages/live-animals-regulations.aspx>
- Indrebø A. (2008, August 19) Animal welfare in modern dog breeding. *Acta Veterinaria Scandinavica*, 2008;50:S6.



- Ireland. (2005, August) Recommendations of working group to review the management of dog breeding establishments. Department of the Environment, Heritage and Local Government. Retrieved from: http://www.google.ca/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0ahUKEwj0--CctbXaAhWB0YMKHYDtCWEQFgggMAA&url=http%3A%2F%2Fdrcd.gov.ie%2Fwp-content%2Fuploads%2FReview-of-DBE-Guidelines-Consultation-Summary-Report.docx&usg=AOvVaw02VNylBGdJuKC_1aB8UYLB
- Ireland. (2011, December 21) Dog Breeding Establishment Guidelines. Department of the Environment, Heritage and Local Government. Retrieved from: <http://drcd.gov.ie/wp-content/uploads/Review-of-DBE-Guidelines-Consultation-Summary-Report.docx>
- Jensen P, ed. *The Behavioural Biology of Dogs*. Wallingford, UK: CAB International, 2007.
- Jensen P. Mechanism and function in dog behaviour. In: Jensen P, ed. *The Behavioural Biology of Dogs*. Wallingford, UK: CAB International, 2007:61-75.
- Jones AC, Gosling SD. Temperament and personality in dogs (*Canis familiaris*): A review and evaluation of past research. *Appl Anim Behav Sci*, 2005;95:1-53.
- Kohn CM, ed. *The Merck Manual for Pet Health Home Edition*. Whitehouse Station, New Jersey: Merck & Co., (2007).
- Lehmann J, Stöhr T, Feldon J. (2000) Long-term effects of prenatal stress experience and postnatal maternal separation on emotionality and attentional processes. *Behav Brain Res* 2000;107:133-144.
- Littlewood KE, Mellor DJ. Changes in the welfare of an injured working farm dog assessed using the five domains model. *Animals*, 2016;6:58.
- Lockwood, R. (1995) The ethology and epidemiology of canine aggression. In: Serpell, J. ed. *The Domestic Dog: Its Evolution, Behaviour, and Interactions with People* Cambridge: Cambridge University Press, 1995:131-138.
- Longair J, Finley GG, Laniel M-A, et al. Guidelines for euthanasia of domestic animals by firearms. *Can Vet J* 1991;32:724-726.
- Loveridge GG. Environmentally enriched dog housing. *Appl Anim Behav Sci* 1998;59:101-113.
- McMillan FD, Duffy DL, Serpell JA. Mental health of dogs formerly used as 'breeding stock' in commercial breeding establishments. *Appl Anim Behav Sci* 2011;135:86-94. doi:10.1016/j.applanim.2011.09.006
- Mehrkam LR, Wynn CDL. Behavioural differences among breeds of domestic dogs (*Canis lupus familiaris*): Current status of the science. *Appl Anim Behav Sci* 2014;155:12-27.
- Meyer I, Ladewig J. The relationship between number of training sessions per week and learning in dogs. *Appl Anim Behav Sci* 2008;111:311-320.
- Mugford RA. Behavioural disorders of dogs. In: Jensen P, ed. *The Behavioural Biology of Dogs*. Wallingford, UK: CAB International, 2007:225-242.
- National Companion Animal Coalition (2005) Requirements to comply with the National Companion Animal Coalition (NCAC) review process regarding the use of radio frequency identification (RFID) technology in Canada. Retrieved from: http://www.ncac-cnac.ca/189_Annex_1_RequirementsToComply_Dec162005.pdf
- National Research Council. *Nutrient Requirements of Dogs and Cats*. Washington, DC: The National Academies Press, 2006.

- Newbury S, Blinn MK, Bushby PA, et al. (2010) Guidelines for standards of care in animal shelters. Association of Shelter Veterinarians. Retrieved from: <https://www.shelternvet.org/assets/docs/shelter-standards-oct2011-wforward.pdf>
- Nicholas FW, Wade CM. Canine genetics: A very special issue. *Vet J*, 2011;189:123-125. doi:10.1016/j.tvjl.2011.06.006.
- Ohl F, van der Staay FJ. Animal welfare: At the interface between science and society. *Vet J* 2012;192:13-19. doi:10.1016/j.tvjl.2011.05.019
- Parker HG, VonHoldt BM, Quignon P, et al. An expressed *fgf4* retrogene is associated with breed-defining chondrodysplasia in domestic dogs. *Science* 2009;325:995-998.
- Rayment DJ, de Groef B, Peteres RA, Marston LC. Applied personality assessment in domestic dogs: Limitations and caveats. *Appl Anim Behav Sci*, 2015;163:1-18.
- Rooney NJ, Cowan S. (2011) Training methods and owner-dog interactions: Links with dog behaviour and learning ability. *Appl Anim Behav Sci* 2011;132: 169-177.
- Seksel K, Maxueski EJ, Taylor A. Puppy socialisation programs: Short and long term behavioural effects. *Appl Anim Behav Sci* 1999;62:335-349.
- Serpell J, ed. *The Domestic Dog: Its Evolution, Behaviour, and Interactions with People*. Cambridge, UK: Cambridge University Press, 1995.
- Serpell J, Jagoe JA. Early experience and the development of behaviour. In: Serpell J, ed. *The Domestic Dog: Its Evolution, Behaviour, and Interactions with People*. Cambridge, UK: Cambridge University Press, Cambridge University Press, 1995:79-102.
- Scott JP, Fuller JL. *Genetics and the Social Behavior of the Dog*. Chicago, Illinois: The University of Chicago. 1965.
- Svartberg K. Individual differences in behaviour: Dog personality. In: Jensen P, ed. *The Behavioural Biology of Dogs* Wallingford, UK: CAB International, 2007:182-206.
- USDA. (2010b, May) Animal and plant health inspection service animal care program inspections of problematic dealers. US Department of Agriculture, Office of Inspector General. Retrieved from: <http://www.usda.gov/oig/webdocs/33002-4-SF.pdf>
- Wade CM. (2011) Inbreeding and genetic diversity in dogs: Results from DNA analysis. *Vet J*, 2011;189:183-188.
- Weese S. (2016) Lungworm in Ontario dogs. *Worms & Germs Blog*. University of Guelph Centre for Public Health & Zoonoses. Retrieved from: <http://www.wormsandgermsblog.com/2016/02/articles/diseases/parasites/lungworm-in-ontario-dogs/>
- Wilson B, Nicholas FW, Thomson PC. Selection against canine hip dysplasia: Success or failure? *Vet J* 2011;189:160-168.

Appendix A - Estimated Energy Requirements

Resting Energy Requirements

$$\text{RER (kcal/day)} = 70 \times \text{wt}_{\text{kg}}^{0.75}$$

lbs	kg	RER (kcal/day)
1	0.5	39
2	0.9	65
3	1.4	88
4	1.8	110
5	2.3	130
6	2.7	149
7	3.2	167
8	3.6	184
9	4.1	201
10	4.5	218
11	5.0	234
12	5.5	250
13	5.9	265
14	6.4	280
15	6.8	295
16	7.3	310
17	7.7	324
18	8.2	339
19	8.6	353
20	9.1	366
25	11.4	433
30	13.6	497
35	15.9	558
40	18.2	616
45	20.5	673
50	22.7	729
55	25.0	783
60	27.3	835
65	29.5	887
70	31.8	938
75	34.1	988
80	36.4	1037
85	38.6	1085
90	40.9	1132
95	43.2	1179
100	45.5	1225
105	47.7	1271
110	50.0	1316
115	52.3	1361
120	54.5	1405
125	56.8	1449
130	59.1	1492
135	61.4	1535
140	63.6	1577
145	65.9	1619
150	68.2	1661
155	70.5	1702
160	72.7	1743
165	75.0	1784
170	77.3	1824
175	79.5	1864
180	81.8	1904
185	84.1	1944
190	86.4	1983
195	88.6	2022
200	90.9	2061



Feline

Growth DER (kcal/day)

Growing kittens = 2.5 x RER

Maintenance DER (kcal/day)

Normal, neutered adult = 1.2 x RER

Intact adult = 1.4 x RER

Obese prone = 1.0 x RER

Weight loss = 0.8 x RER

Canine

Growth DER (kcal/day)

Up to four months = 3 x RER

Four months and older = 2 x RER

Maintenance DER (kcal/day)

Normal, neutered adult = 1.6 x RER

Intact adult = 1.8 x RER

Obese prone = 1.4 x RER

Weight loss = 1.0 x RER

Work DER (kcal/day)

Light work = 2 x RER

Moderate work = 3 x RER

Heavy work = 4-8 x RER

RER = Resting Energy Requirement represents the energy requirement for a normal animal at rest in a thermoneutral environment, and is based on body weight.

DER = Daily Energy Requirement represents the average daily energy expenditure of an animal, dependent on lifestage and activity (work, gestation, lactation and growth).

Reprinted with permission of the copyright owner, Hill's Pet Nutrition, Inc.



CANADIAN VETERINARY
MEDICAL ASSOCIATION
L'ASSOCIATION CANADIENNE
DES MÉDECINS VÉTÉRINAIRES

Canadian Veterinary Medical Association
Third Edition | 2018

Besoins énergétiques estimés

Besoins énergétiques au repos (BER)

$$\text{BER (kcal/day)} = 70 \times \text{poids}_{\text{kg}}^{0,75}$$

lb	kg	BER (kcal/jour)
1	0,5	39
2	0,9	65
3	1,4	88
4	1,8	110
5	2,3	130
6	2,7	149
7	3,2	167
8	3,6	184
9	4,1	201
10	4,5	218
11	5,0	234
12	5,5	250
13	5,9	265
14	6,4	280
15	6,8	295
16	7,3	310
17	7,7	324
18	8,2	339
19	8,6	353
20	9,1	366
25	11,4	433
30	13,6	497
35	15,9	558
40	18,2	616
45	20,5	673
50	22,7	729
55	25,0	783
60	27,3	835
65	29,5	887
70	31,8	938
75	34,1	988
80	36,4	1037
85	38,6	1085
90	40,9	1132
95	43,2	1179
100	45,5	1225
105	47,7	1271
110	50,0	1316
115	52,3	1361
120	54,5	1405
125	56,8	1449
130	59,1	1492
135	61,4	1535
140	63,6	1577
145	65,9	1619
150	68,2	1661
155	70,5	1702
160	72,7	1743
165	75,0	1784
170	77,3	1824
175	79,5	1864
180	81,8	1904
185	84,1	1944
190	86,4	1983
195	88,6	2022
200	90,9	2061



Félin

Croissance BEQ (kcal/jour)

Chatons en croissance = 2,5 x BER

Maintien BEQ (kcal/jour)

Adulte normal stérilisé = 1,2 x BER

Adulte intact = 1,4 x BER

Prédisposé obésité = 1,0 x BER

Perte de poids = 0,8 x BER

Canins

Croissance BEQ (kcal/jour)

Jusqu'à quatre mois = 3 x BER

Quatre mois et plus = 2 x BER

Maintien BEQ (kcal/jour)

Adulte normal stérilisé = 1,6 x BER

Adulte intact = 1,8 x BER

Prédisposé à obésité = 1,4 x BER

Perte de poids = 1,0 x BER

Travail BEQ (kcal/day)

Travail léger = 2 x BER

Travail modéré = 3 x BER

Travaux lourds = 4 à 8 x BER

BER = Le besoin énergétique au repos représente le besoin en énergie d'un animal normal au repos dans un environnement thermoneutre et est basé sur le poids corporel.

BEQ = Le besoin énergétique quotidien représente la dépense énergétique quotidienne moyenne d'un animal, selon le stade de vie et le niveau d'activité (travail, gestation, lactation et croissance).

Reprinted with permission of the copyright owner, Hill's Pet Nutrition, Inc.



CANADIAN VETERINARY
MEDICAL ASSOCIATION
L'ASSOCIATION CANADIENNE
DES MÉDECINS VÉTÉRINAIRES

Canadian Veterinary Medical Association
Third Edition | 2018

Appendix B

Body Condition



Body Condition Score



UNDER IDEAL

- 1 Ribs, lumbar vertebrae, pelvic bones and all bony prominences evident from a distance. No discernible body fat. Obvious loss of muscle mass.
- 2 Ribs, lumbar vertebrae and pelvic bones easily visible. No palpable fat. Some evidence of other bony prominences. Minimal loss of muscle mass.
- 3 Ribs easily palpated and may be visible with no palpable fat. Tops of lumbar vertebrae visible. Pelvic bones becoming prominent. Obvious waist and abdominal tuck.

IDEAL

- 4 Ribs easily palpable, with minimal fat covering. Waist easily noted, viewed from above. Abdominal tuck evident.
- 5 Ribs palpable without excess fat covering. Waist observed behind ribs when viewed from above. Abdomen tucked up when viewed from side.

OVER IDEAL

- 6 Ribs palpable with slight excess fat covering. Waist is discernible viewed from above but is not prominent. Abdominal tuck apparent.
- 7 Ribs palpable with difficulty; heavy fat cover. Noticeable fat deposits over lumbar area and base of tail. Waist absent or barely visible. Abdominal tuck may be present.
- 8 Ribs not palpable under very heavy fat cover, or palpable only with significant pressure. Heavy fat deposits over lumbar area and base of tail. Waist absent. No abdominal tuck. Obvious abdominal distention may be present.
- 9 Massive fat deposits over thorax, spine and base of tail. Waist and abdominal tuck absent. Fat deposits on neck and limbs. Obvious abdominal distention.

German A, et al. Comparison of a bioimpedance monitor with dual-energy x-ray absorptiometry for noninvasive estimation of percentage body fat in dogs. *AJVR* 2010;71:393-398.
 Jeusette I, et al. Effect of breed on body composition and comparison between various methods to estimate body composition in dogs. *Res Vet Sci* 2010;88:227-232.
 Kealy RD, et al. Effects of diet restriction on life span and age-related changes in dogs. *JAVMA* 2002;220:1315-1320.
 Laflamme DP. Development and validation of a body condition score system for dogs. *Canine Pract* 1997;22:10-15.



Reprinted with permission from *Global Nutrition Committee Toolkit* provided courtesy of the *World Small Animal Veterinary Association*.

Appendix C

Five Freedoms

The Five Freedoms is a core concept in animal welfare stating that an animal's primary welfare needs can be met by safeguarding the following five freedoms:

- Freedom from Hunger and Thirst by ready access to fresh water and a diet to maintain full health and vigour.
- Freedom from Discomfort by providing an appropriate environment, including shelter and a comfortable resting area.
- Freedom from Pain, Injury or Disease by prevention or rapid diagnosis and treatment.
- Freedom to Express Normal Behaviour by providing sufficient space, proper facilities, and company of the animal's own kind.
- Freedom from Fear and Distress by ensuring conditions and treatment which avoid mental suffering.
- The Five Freedoms is a concept that is frequently referenced by animal welfare professionals around the world, especially in relation to farm animal care.

Adapted from http://www.cfhs.ca/five_freedoms_of_animal_welfare



Appendix D

Summary of Requirements

Note: Section number included at beginning of subsections for reference purposes.

Section D.1 Animal Environment (Housing and Handling Facilities)

D.1.1.1 Construction

1. Construct interior walls and partitions of materials that are appropriately treated or coated to be rendered washable, sanitizable, impervious to moisture, smooth, and durable.
2. The facility meets local construction requirements including fire safety standards related to relevant local legislation.
3. Use only non-toxic materials in places in which dogs have direct contact.
4. Interior walls are in good condition, free of sharp edges or other potential causes of injury.
5. Walls and fences are sturdy, in good repair, and of sufficient height and small enough gaps to prevent escape.

D.1.1.2 Temperature

1. Maintain a temperature in the kennel that optimizes dog comfort.

D.1.1.3 Roofs

1. Roof coverings fastened to sheathing or directly to the roof joists are laid so as to prevent the entrance of insects, birds, and animals that may be harmful to the buildings or dogs into the facility.
2. The roof is covered with suitable materials in order to eliminate leakage and exposure of dogs to adverse weather conditions.

D.1.1.4 Ceilings

1. Ceilings are constructed of impervious materials and subject to finishing comparable to those of the walls and partitions.
2. Ceilings, walls, and partitions abut tightly, preventing gaps which can lead to entry by insects, birds, and animals that may be harmful to the buildings or dogs.
3. Seal and treat corners of ceilings, walls, and partitions to render them completely washable and sanitizable.

D.1.1.5 Floors

1. Ensure good foot health by constructing solid floors. Wire or slatted flooring is unacceptable. Ensure the floor supports the dog without sagging.
2. Construct floors of impervious materials, such as sealed concrete or other materials, which provides a smooth surface that is easy to clean and sanitize.
3. Floors are in good repair and with good traction to prevent slipping and injury.
4. Drain size is at least 10 cm.
5. Drain covers are used and designed to minimize the risk of dog injury.
6. Slope floors towards any drain(s) at a minimum pitch of 2.1 cm/m so that the dogs kept in the enclosure do not have continuous or extended contact with any part of the floor which is wet.

D.1.1.6 Ventilation

1. Ventilation and heating systems are constructed to supply fresh air and enable adequate exchange of air and maintenance of optimal environmental conditions for all seasons.
2. Provide additional ventilation by using exhaust fans and/or air conditioning when ambient temperatures reach more than 26°C.

D.1.1.7 Humidity

1. Control indoor humidity levels to maintain animal comfort, minimize the risk of transmission of animal disease, prevent damage to the structural integrity of the building and its contents, and prevent accumulation of excess moisture that can promote growth of mould.

D.1.1.8 Light

1. Lighting is adequate so that all areas of the interior of the kennel can be clearly seen.
2. Minimum lighting is eight hours per day. Maximum lighting is comparable to the length of natural daylight hours.
3. At a minimum, dogs experience eight consecutive hours where minimal or no artificial lighting is used to ensure good quality rest.

D.1.1.9 Noise

1. Use materials that optimize soundproofing when building or renovating a facility.
2. Maintain an environment in which the average sound level is less than 85 dB.

D.1.2.1 General Housing Principles

1. Females in heat are not housed with non-neutered males.
2. Dogs exhibiting interdog aggression are not housed with incompatible dogs.
3. Puppies younger than 10 weeks old are housed in an enclosure with their dam separate from other dogs. Initial vaccines and deworming are completed before 10 weeks of age or as directed by a veterinarian to minimize the risk of disease transmission.
4. Any primary dog enclosure:
 - i. allows dogs to lie flat on their sides outside their bed in the sleeping area;
 - ii. allows dogs to move freely, which includes the ability to walk and turn around easily, move about easily for the purpose of postural adjustments including stretching, wagging their tails without touching the enclosure walls or ceiling, standing normally to their full height without touching the enclosure walls or ceiling, and lying down without touching another dog;
 - iii. provides a separate sleeping area for the dog that does not become damp and has sufficient clean, dry, and comfortable bedding for the dog appropriate to its size and coat;
 - iv. allows the dog to urinate and defecate away from their sleeping and eating areas;
 - v. prevents urine and feces from contaminating adjoining enclosures;
 - vi. has an area to place and secure food and water bowls to prevent bowls from becoming contaminated, spilling, and soiling enclosure contents, and allows animals to eat and drink freely;
 - vii. is free of any dangerous structure or object that may cause injury;
 - viii. contains enrichment strategies including toys, enabling species appropriate contact that includes other dogs and humans, and appropriate exercise;
 - ix. is evaluated daily to ensure dogs sharing an enclosure or housed adjacent to each other are compatible; separate dogs that show behaviours towards each other that could result in injury, cause stress, or prevent access to food, bedding, or space resources;
 - x. has at least one side through which a caretaker can observe the dog and the dog can see the exterior;
 - xi. provides a distinct activity area large enough to allow dogs to exercise, and to socialize and play freely with other dogs or humans, allowing access to the outdoors when weather permits;
 - xii. provides a separate housing area where dogs can be moved while their enclosure is being cleaned; dogs are not returned to their primary enclosure until it is dry.
5. Tethering of dogs (i.e., chains or ropes used to tie the dog to an immovable object such as a stake or building) is not allowable as a method of confining a dog to a primary enclosure, nor as the only means of containment.
6. Any restraining device used for tethering allows the dog to move in a manner that is safe, prevents entanglement, and does not weigh more than 10% of the dog's body weight.

7. Minimum primary enclosure space requirements⁴

Height of the dog measured at the shoulder of the dog (cm)	Area (m ²)	Width (m)	Height (m)
70 or greater	15	2.40	1.80
40 to 70	10	1.80	1.80
20 to 40	6	1.40	1.20
5 to 20	4	1	1.20

Minimum primary enclosure space requirements apply to the keeping of one adult dog. Dams and their puppies up to eight weeks of age are provided with an additional space of 10% per puppy. If two or more adult dogs are kept in one enclosure, the minimum dimensions for the enclosure specified are increased by 1.5 m² for each dog kept in the enclosure.

D.1.2.2 Primary Outdoor Enclosure

1. Shelter and protection from the elements in both the primary enclosure and activity area, if separate, including protection from direct sunlight, wind, rain, sleet, snow, and extreme cold or hot temperatures.
2. A stand-alone shelter such as a dog house accessible to dogs at all times. This shelter consists of a solid roof and walls that are tall enough to allow the dog to stand fully upright, a doorway that is large enough for the dog to enter and exit comfortably, and a solid floor constructed in such a manner as to remain dry. The floor is large enough for the dog to turn around and lie down comfortably.
3. The shelter contains adequate bedding and insulation, such as straw, to keep the animals clean, dry, and warm.
4. Dogs unable to tolerate living outdoors have access to the indoors, including but not exclusive to those that are aged, ill, or injured.

D.1.2.3 Isolation Area

1. An isolation area that is completely separate from the existing healthy dog population.
2. Newly acquired dogs and dogs suspected of, or receiving treatment for, a contagious disease are not housed in the same area simultaneously.
3. The isolation area minimizes the movement of air to other areas.
4. Sufficient space is always provided for the dog to lie down, eat, drink, and relieve themselves. The dog also has an appropriate area for movement and exercise as well as toys for enrichment, unless otherwise recommended by the veterinarian.
5. There is space in which personnel can perform daily duties, including providing medical treatments, cleaning, feeding, and social interaction.
6. Cleaning materials and equipment are designated solely for the isolation area and are inaccessible to the dog(s).
7. Food and water bowls are cleaned in the isolation area or sprayed and washed in a sink that is disinfected after use.
8. Appropriate disinfectants and sanitation protocols are used depending on disease conditions. Disinfectants are used in accordance with manufacturer's recommendations.
9. Personnel are adequately trained in quarantine protocols.
10. Sanitation and hygiene protocols are strictly applied to the isolation area, including all reusable bedding and clothing.
11. Waste material and disposable items are placed into garbage bags before being removed from the isolation area and are disposed of immediately.

D.1.2.4 Whelping Area

1. Provide adequate human supervision and access to human assistance during the whelping period and following the birth of the puppies.
2. The whelping box has a floor area two and a half times the size of the dam.
3. Absorbent bedding to keep the dam and puppies clean and dry.
4. Excrement is removed from whelping area at least twice daily, or more often as required to ensure good health and sanitation.
5. The whelping area allows the dam to have access to food, water, and the ability to rest and eliminate away from the puppies.
6. The water bowl is situated so that a puppy cannot fall into it.
7. The whelping box prevents puppies from escaping or harming themselves.
8. Until puppies are able to successfully thermoregulate, a supplemental source of safe heating is available.

D.1.3 Sanitation

1. All enclosures are cleared of debris and cleaned of feces and urine at least twice daily, or more often as necessary to maintain a sanitary environment and good health.
2. All waste containment/cleaning equipment, food preparation areas, food/water bowls, and utensils are:
 - i. cleaned daily,
 - ii. disinfected weekly, and
 - iii. cleaned, disinfected, and rinsed before use by another dog.
3. Food/water storage containers are cleaned and disinfected before refilling with new food/water.
4. Adequate personnel time is allocated daily for routine cleaning.
5. Personnel follow hygienic practices to reduce the risk of transmitting diseases among animals and from animals to humans.
6. An outer layer of protective clothing is worn over regular clothing in the isolation area and removed before leaving the area. Protective clothing includes, but is not limited to, disposable gowns, coveralls, lab coats, scrub tops and bottoms, disposable gloves, shoe covers, and/or washable shoes.
7. Choose cleaning and disinfection chemicals and materials based on their suitability to the environmental conditions present and the pathogens for which those particular animals are at risk and in consultation with a veterinarian.
8. Chemicals are used safely and in accordance with the manufacturers' instructions.
9. Thoroughly rinse all surfaces and utensils that have been in contact with disinfectants and cleaners that require rinsing to avoid potential poisoning and chemical burn injuries.
10. Safety Data Sheets (SDS) and instructions for all chemical disinfectants held are readily accessible.

D.1.4 Waste Disposal

1. Waste products are removed at least twice daily and more frequently if the number of dogs kept, or the conditions of the housing of the dogs, necessitates collection more often.
2. Waste products are collected and disposed of promptly in a hygienic manner and in accordance with the requirements of government authorities.
3. Maintain ammonia level so as to comply with applicable health and safety regulations.

D.1.5 Nuisance Wildlife Control

1. Have a nuisance wildlife management plan in place incorporating non-lethal preventative methods such as exclusion techniques and non-harmful physical or chemical deterrents.
2. Traps and pesticides, appropriate to the target species, are stored in locked and weighted or fastened boxes, or placed in an area that non-target animals cannot access.
3. Pesticides that are toxic to dogs are not used in kennel operations.
4. All animal remains are promptly removed and handled in a hygienic manner and in accordance with the requirements of government authorities.
5. Pesticides are only used by individuals with a government issued pesticide applicator licence or equivalent level of competence in unregulated jurisdictions.
6. Safety Data Sheets (SDS) documents for pesticides are consulted.

D.1.6 Building Safety and Emergencies

1. An emergency action plan is readily available which contains:
 - i. evacuation procedures,
 - ii. emergency contacts, and
 - iii. prompt access to sufficient transport cages and vehicles.
2. Kennel personnel are familiar with the emergency action plan and a person is appointed on each shift to ensure a potential evacuation will proceed according to plan.
3. Emergency plans are available ensuring an alternative means of temperature regulation, ventilation, feeding, and watering of dogs are available in the event of a power failure, mechanical breakdown, or other emergency situation.
4. The kennel operator is aware of and compliant with the National Fire Code of Canada and the National Building Code of Canada, as well as any municipal, provincial, or territorial public health, safety, and fire protection requirements.
5. The number of smoke detectors and carbon monoxide (CO) monitors in place is compliant with applicable regulations.
6. Fire extinguishers, smoke detectors, and CO monitors are maintained in good working order.
7. Electrical equipment is maintained to prevent stray voltage and ensure wiring or electrical panels are not accessible to dogs.
8. Emergency lighting is available.
9. Fire drill exercises are performed annually.

Section D.2 Food and Water

D.2.1 Food

1. Mature dogs are fed at least once every 24 hours. Juvenile dogs and puppies are fed at least two times per day, or more frequently to maintain health and vigour.
2. Expired, spoiled, or contaminated dog food is not fed.
3. Food storage bins are covered, wildlife-proof, and properly marked.
4. Food is stored in cool, dry conditions and fed as per label to prevent spoilage.
5. Dogs receive a ration that is adequate for maintaining health, vigour, and appropriate body condition (see Appendix B).
6. Personnel thoroughly wash their hands, utensils, and other items in direct contact with dog food immediately after the food is handled.
7. Dogs fed raw diets are not in direct contact with immunocompromised humans and animals.
8. Store food dishes and utensils in a clean and protected area.

D.2.2 Water

1. Potable unfrozen drinking water is readily accessible indoors and outdoors.
2. Water is always kept in clean containers.
3. Snow is not a primary source of water.

Section D.3 Animal Well-being

D.3.1 Principles of Health Management

1. The kennel operator has a valid veterinarian-client-patient relationship (VCPR) with a licensed veterinarian(s) responsible for providing advice on prevention and control of diseases and for the provision of prompt adequate veterinary care for all ill or injured dogs and dogs showing signs of pain or suffering.
2. The information for contacting the veterinary clinic/hospital, emergency care facility, kennel operator, local fire/police, and alarm company is posted in a location readily accessible to all kennel staff.
3. Incoming dogs and puppies are quarantined as deemed appropriate by a licensed veterinarian to reduce the risk of disease transmission.
4. All adult dogs and non-nursing puppies have easily read, humanely applied, unique identification. Examples include, but are not exclusive to, a labelled collar, microchip, tattoo, or nose print. Nursing puppies can be uniquely identified by gender or coat markings, or, where necessary, use of a visual marking.
5. In premises housing multiple dogs, enclosures are labelled to indicate which dogs are housed within them.

6. All records are kept current, readily accessible by personnel either onsite or by a veterinarian, and maintained in legible written and/or electronic format.
7. Individual animal records include changes in appetite, food type, thirst, urination, defecation, or behaviour.
8. Individual animal identification records include:
 - vii. date of birth, breed, gender, colour, markings.
 - viii. nose print, tattoo, tag, and/or microchip number if present.
 - ix. name, phone number, email and physical address of dog's owner.
 - x. for temporary care: date of arrival and departure.
 - xi. for transfer of dog ownership: date and source of acquisition or departure, including name, physical address, telephone number, and email of new or previous owner and contracts/ agreements regarding sale or purchase of animals.
 - xii. if applicable, date of death and suspected or confirmed cause of death.
9. Individual animal health records are kept and include information on:
 - vi. dates and test results for common infectious diseases, at a frequency schedule deemed appropriate by the veterinarian (i.e., fecal testing for intestinal parasites, blood testing for heartworm).
 - vii. dates and name of individuals performing medical procedures for breed cosmetic or conformation purposes where permitted (i.e., dewclaw removal, tail docking, ear cropping).²
 - viii. vaccination/deworming treatment, including dates of treatment, name, and dose of medication administered.
 - ix. date of spay or neuter if altered.
 - x. date of diagnosis of illness or injury and diagnostics and/or treatment provided.
10. Individual whelping records for:
 - iv. sire - include dates bred, dams bred to, successful/failed breedings, pre-breeding testing, and applicable test results for hereditary defects.
 - v. dam - include dates in heat, dates bred, sires bred to, successful/failed breedings, whelping dates, number per litter including live/dead births, birthing complications, and applicable test results for hereditary defects.
 - vi. offspring - include weight measured weekly until weaned, or more frequently as required if showing signs of illness/injury or weight loss.
11. Keep records of maintaining fire extinguishers, and smoke and CO detectors in good working order for two years.
12. Records for all animals are kept for a minimum of two years after the animal leaves the premises or dies on premises.

² See appendix for CVMA positions on these procedures.

D.3.1.3 Health Care

1. Sick, injured, or diseased animals receive prompt treatment and nursing care. The treatment is appropriate for the condition. For animals that are not responding to treatment(s) according to protocols agreed to in advance with the kennel's veterinarian, veterinary advice is obtained without delay.
2. Dogs diagnosed with ringworm are to be isolated away from other animals and treated until a veterinarian has determined them to be cleared of infection, which typically is based on negative culture results. Puppies from the same litter that have tested positive can be housed together. These puppies/dogs are not sold or moved to a different facility until a veterinarian has determined that they are no longer infected.
3. In the case of disease outbreak, kennel personnel wear appropriate personal protective equipment (PPE) as recommended by a veterinarian.
4. Fecal tests are carried out at least yearly by dog owners, more often in the case of disease outbreaks, or as deemed appropriate by a veterinarian.
5. All animals with test results positive for parasitic, viral, bacterial, or fungal infection receive appropriate treatment as recommended by a veterinarian.
6. Puppies are treated for intestinal parasitic infections with an agent effective against at least roundworm infection at two, four, six, and eight weeks of age, or as recommended by a veterinarian. Dams housed with puppies between two and eight weeks of age are dewormed at the same schedule, or as recommended by a veterinarian.
7. Dams are treated for intestinal parasitic infections before mating, with an agent effective against roundworm infection.
8. Adult dogs receive preventative treatment from dog owners at least biannually for common parasitic intestinal infections (e.g., roundworm) with an effective agent, or as recommended by a veterinarian.
9. Personnel are immediately notified of any zoonotic disease diagnosed in dogs.
10. All dogs are checked regularly for the presence of common external parasites such as fleas and ticks. All ticks found attached to a dog's skin are promptly and properly removed.

D.3.1.4 Vaccinations

1. DA2P vaccines: Unless otherwise recommended by a veterinarian, puppies receive their initial vaccine between six to eight weeks of age and then receive at least two to three booster vaccines three to four weeks apart, such that final vaccination is administered between 14 and 16 weeks of age and 18 and 20 weeks in higher risk environments. Unless otherwise recommended by the veterinarian, adult dogs receive a booster vaccine one year after their final puppy vaccine and then on a schedule recommended by a veterinarian.
2. Rabies vaccines: Unless otherwise recommended by the veterinarian, puppies receive initial vaccines between three to four months of age. Unless otherwise recommended by a veterinarian, adult dogs receive a booster vaccine one year after the puppy vaccine and then on a schedule recommended by a veterinarian.
3. Vaccines are stored and administered in compliance with provincial legal requirements from the veterinary governing body.
4. Before eight weeks of age, puppies only contact and/or socialize with dogs current on vaccines and are not exposed to environments in which dogs with unknown vaccine status have been present.

D.3.2 Caregiver Training and Duties

1. Caregivers provide ongoing effective, regular observation, and health care.
2. Caregivers ensure dogs do not associate with incompatible dogs, other adversarial animals, or nuisance wildlife.
3. The number of caregivers and their experience are sufficient to ensure the daily health and welfare requirements of dogs.
4. Enough time is assigned to complete sanitation tasks promptly each day so dogs are kept in sanitary conditions.
5. Caregivers are adequately trained and knowledgeable in animal care and husbandry. This includes knowledge of:
 - i. appropriate low-stress handling, restraint, training, grooming, and exercise;
 - ii. recognizing and taking appropriate action when animals display behaviours indicative of stress, anxiety, depression, aggression, incompatibility, illness, and injury;
 - iii. daily recordkeeping;
 - iv. sanitation protocols;
 - v. infectious disease protocols;
 - vi. proper maintenance, identification, and reporting of damage/deterioration of kennel facilities to ensure effective repair and prevent negative impacts on animal health and well-being;
 - vii. emergency protocols within the premises such as response to flood/fire, power failure, evacuation, accidental/acute animal injury/illness, and emergency contact procedure(s); and
 - viii. appropriate respectful interactions with animals, colleagues, and the public.

D.3.3 Behaviour, Socialization, Training, and Enrichment

1. When placing dogs in homes, evaluate the behaviour of dogs and ensure the home is suited to their personality and behavioural traits. Explain to potential owners the behaviour characteristics of the dog of interest before sale or exchange.
2. Socialization and humane-training plans that expose dogs of all ages to positive experiences are in place and readily available for review. These plans teach the development of confidence and trust; and do not expose dogs to negative experiences that result in fear, pain, injury, or illness.
3. Humans who interact with dogs of all ages ensure their clothing, hands, and feet are clean in order to minimize the risk of disease transmission to dogs.
4. Starting at birth, caregivers handle puppies gently on a daily basis.
5. Puppies between three and eight weeks of age receive a minimum of 20 minutes twice a day of socialization with humans. Some of this time is spent with each puppy individually.
6. Dogs and puppies older than eight weeks of age receive a minimum of 30 minutes per day of contact with other compatible dogs, and at least 30 minutes per day of direct contact with humans.
7. Puppies between eight and 12 weeks are exposed to experiences outside the kennel environment, including leash walking, car rides, and positive veterinary visits.
8. Daily enrichment is provided to dogs. Enrichment includes play, exposing dogs to various outdoor and indoor settings, toys, training, exercise, and affection. The type of enrichment tools and length of exposure will vary greatly depending on the age and temperament of the dog.



Section D.4 Husbandry Practices

D.4.1 Responsible Breeding

D.4.1.1 Genetics, Conformation, and Temperament

1. Breeders are educated about the common inherited diseases and conformation traits that may negatively impact quality of life and prevent normal functions for the breeds they are raising.
2. The dam and sire are not bred for the first time until genetic testing, as recommended by a veterinarian, is performed on dogs whose breed carries inherited diseases.
3. Dogs that test positive for inherited diseases are not bred.
4. Breeders provide new owners with genetic test results for both the puppy and its parents.
5. Dogs with physically apparent genetic abnormalities are not bred to dogs with similar abnormalities.
6. Dogs with known internal genetic abnormalities are removed from the breeding program.
7. As confirmed by the veterinarian, dogs with conformation traits that negatively affect their quality of life are not bred.
8. Remove animals from the breeding program that are not able to see or breathe normally, are not physically fit or able to run freely, and are not able to give birth to viable offspring.³
9. Dogs that display undesirable behavioural traits such as excessive fear, overt shyness, or inappropriate aggression are not used for breeding.

³ The Breed Watch Booklet, available from the UK Kennel Club, is a useful tool for promoting pedigree dog health: http://www.thekennelclub.org.uk/media/341575/breed_watch_booklet.pdf

D.4.1.2 Soundness

1. Before introducing a dog to a breeding program, consult with a veterinarian to identify genetic abnormalities known to be inherent to the breed, and test for those abnormalities appropriately.
2. Before entering a breeding program, dogs are determined by a veterinarian to be sound for breeding.
3. Dams are not bred before their second estrous cycle or 18 months of age, whichever comes first, or as otherwise recommended by a veterinarian.
4. Dogs that are affected by disease or injury causing pain while breeding are removed from the breeding program until such time as the issues are resolved.
5. Dogs showing clinical signs of infectious and/or zoonotic disease are removed from the breeding program until such time as they are deemed healthy by a veterinarian.
6. Dogs that are not socially well-adapted resulting in a threat to public or animal safety, or display a psychological aversion to breeding, are removed from the breeding program.
7. The frequency of breeding, total number of breedings, and age to retire animals from breeding, are determined in consultation with a veterinarian.

D.4.2 Handling, Restraint, and Grooming

1. Use positive-reinforcement methods for routine handling and restraint.
2. The method of handling provides the least restraint required to allow the specific procedure(s) to be performed properly. It will minimize fear, pain, stress, and suffering for the animal, and protect both the dog and personnel from harm.
3. Provide regular breed-appropriate grooming, preventing matting and related skin injury.
4. Personnel are adequately trained to handle and groom the dogs.
5. Grooming tools are maintained in good working order and are regularly sanitized in keeping with health management and infectious disease control protocols.
6. Trim nails as required to prevent overgrowth.

D.4.3 Puppy and Dog Placement

1. Puppies considered for sale are fully weaned and eating independently and are at least eight weeks of age before being given to their new owner, unless otherwise directed by a veterinarian.
2. Any puppies or adult dogs considered for sale are healthy, bright, alert, and sociable.
3. Any exchange of ownership includes a written agreement. This agreement includes unique identifiers of the new owner, the former owner, the dog, and a date and the terms of the exchange of ownership.
4. Dogs are engaged in a veterinary-directed healthcare program before exchange of ownership. This ensures dogs are up-to-date on vaccinations and parasite treatments.
5. Provide documentation on the health care and medical history of the dog to the new owner, and the care required.
6. Before sale, disclose any known history of conformation traits within the family line that prevent normal function or negatively impact the quality of life, any cosmetic alterations, and any behaviour concerns.

D.4.4 Considerations for Working Dogs

1. Working dogs are selected for work based on their breed, including the appropriate conformation and temperament for the specific work they will be engaged in.
2. The work that dogs are engaged in is appropriate for the physical capabilities of the dog.
3. Dogs work willingly and within their capabilities and conditioning. They are given appropriate rest and play periods.
4. Dogs are housed in such a way as to allow them to display natural behaviours, to socialize with or without other species of animals and humans, as appropriate, and to protect public safety.
5. Performance-enhancing drugs are not used unless prescribed by a veterinarian to improve the quality of life for the dog.
6. Handlers assess working dogs for weight loss, hydration, injury, behaviour, attitude, and willingness to work.
7. Work-related weight loss, illness, or injuries are immediately addressed and appropriately treated.
8. Positive-reinforcement training methods are used.
9. Dogs are eager to work and do not suffer from distress when engaged in their work.
10. Appropriate measures are taken to protect dogs from illness or injury due to inclement weather and extremes in temperature including dehydration, frostbite, hypothermia, and hyperthermia.
11. Dogs are provided with protective equipment appropriate for the conditions they will be working in.
12. Equipment worn on the dogs such as footwear, harnesses, or collars are properly fitted and constructed to ensure comfort and prevent injury.

D.4.5 Aging and Retirement

1. Screen prospective new owners of aging dogs for compatibility and ability to provide for the dog's physical, medical, and behavioural needs.
2. Provide additional shelter, bedding, and insulation for aging outdoor dogs as required. Indoor housing is to be provided for outdoor dogs who no longer tolerate outdoor housing.
3. Adjust feed and water regimens as required to maintain appropriate body condition; to compensate for a decreasing metabolic rate, general decreased activity level, and development of age-related disease.

Section D.5 Transport

1. Personnel transporting dogs have adequate training and experience to maintain and ensure the health and well-being of the dogs throughout all stages of transport.
2. Weather conditions are assessed before transport to prevent possible harm to the animal from excessive wind, rain, snow, heat, or cold.
3. When injured, pregnant, or ill dogs are transported for medical reasons, they are kennelled separately from other dogs to prevent injury and spread of disease. When dogs in such conditions need to be transported for any reason other than medical, fitness for transport should be determined by a veterinarian.
4. Nursing puppies are transported separately from other dogs but with their dam, and are not mixed with puppies that are not part of the same litter. Care is taken to ensure the puppies are not accidentally injured by the dam during transportation.
5. Before transport, dogs are conditioned to their container to learn to associate it with comfort and security.
6. Containers for all sizes of dogs meet the requirements of the Live Animal Regulations of the IATA.
7. Each container is clean, in good condition, is free of mechanical defects, is leak-proof, and contains absorbent bedding. Placement and construction of containers allow for visibility of the dog.
8. Each container and transport vehicle is designed to provide adequate ventilation, humidity, air pressure (if appropriate), and temperatures suitable for the health, welfare, and comfort of the animals. Temperatures may not exceed 26°C.
9. Prior to transport, ensure relevant health certificates, proof of vaccination, and import/export documents are available for review by authorities as required.
10. Dogs that exhibit aggression are kept separate from other animals.
11. Females in estrus are not transported in the same container as males.
12. Dogs are transported in areas of vehicles with adequate light and ventilation.
13. Containers holding dogs are properly secured and dogs are protected from adverse weather conditions.
14. Proper communication occurs among all personnel involved during transportation.
15. Emergency care is provided when necessary during transport.
16. All dogs transported in the same container are compatible with each other.
17. In vehicles, other than a personal motor vehicle, a thermometer is placed in the area of the transport vehicle at the level of the animals.
18. During ground transport, breaks are provided at least every four hours for at least 20 minutes and during this time, dogs are provided with the opportunity to exercise, urinate, defecate, and drink water.
19. The individual nutritional needs of each dog are met during transport.
20. IATA standards are followed during air transport.
21. If a dog is being transported to a foreign country, vaccination and health certification are in compliance with the importing country's regulations, as required by law. Health certificates are issued to meet current airline requirements if the dog is being transported by air.
22. Dogs transported by exposed or open vehicles such as motorcycles, pickup trucks, or flatbed trucks are secured with a proper restraining device or in a closed container.

Section D.6 End of Life Considerations and Euthanasia

1. Decisions regarding euthanasia are conducted according to a plan developed in advance with a veterinarian.
2. Personnel assisting with euthanasia are adequately trained in proper handling, restraint, euthanasia, and disposal procedures.
3. A dog is euthanized without delay if a has determined that illness or injury, including mental or physical impairment, cannot be reversed to the point where the dog will be able to return to a good quality of life.
4. Euthanasia is performed by a veterinarian or under veterinary supervision as determined by provincial legislation. If situations prevent a veterinarian from performing euthanasia in a timely fashion (i.e., inclement weather, geographic location, sudden or rapidly progressing medical condition), euthanasia by firearms is acceptable if performed in accordance with requirement 6 (below) by appropriately trained personnel.
5. The Canadian Veterinary Medical Association (CVMA) Euthanasia Position Statement, the CVMA Guidelines for Euthanasia of Domestic Animals by Firearms, and the American Veterinary Medical Association (AVMA) euthanasia guidelines are followed with regard to appropriate euthanasia methods for dogs. These documents may be enforceable under local provincial animal welfare legislation.
6. The method used for euthanasia:
 - i. renders dogs irreversibly unconscious as rapidly as possible with the least possible pain, fear, and anxiety;
 - ii. produces minimal undesirable physiologic and psychological effects on the dog being euthanized, and on the humans and animals in their immediate vicinity;
 - iii. is safe and produces minimal stress for the operator and any assistants or observers; and
 - iv. has a minimal ecological impact.
7. The person performing the euthanasia confirms the dog is deceased.
8. Disposition of animal remains complies with local legislation.
9. The handling of deceased animals has minimal impact on the environment and other animals. If an animal's remains are buried or cremated, it is done in such a way that minimizes risk of soil contamination, water contamination, and scavenging.
10. If animal remains cannot be properly disposed of immediately, an appropriate storage facility such as a secured freezer is available onsite, to prevent carcass spoilage and scavenging.