

INTRODUCTION

This manual has been developed as a study guide for the Florida State Fair Skillathon which is part of the Champion Youth Program. The topic for this year's Skillathon is **Health care management**.

The Florida State Fair recognizes that agricultural education instructors, 4H agents, parents, and leaders provide the traditional and logical instructional link between youth, their livestock projects and current trends in the animal agriculture industry. **PLEASE NOTE:** This manual is provided as a **study guide** for the skillathon competition and should be used as an additional aid to ongoing educational programs.

Sections are labeled **Junior, Intermediate & Senior, Intermediate & Senior, or Senior** to help exhibitors and educators identify which materials are required for their age level.

Juniors

(age 8-10 as of September 1, 2009)

Internal & External Body Parts
Nails & Nail Trimming
Ear Cleaning (including labeling diagram)

Intermediates

(age 11-13 as of September 1, 2009)

all of the above plus...
Health Instruments & Medications
How to give an Injection & Injection Sites
Common Internal Parasites and Symptoms

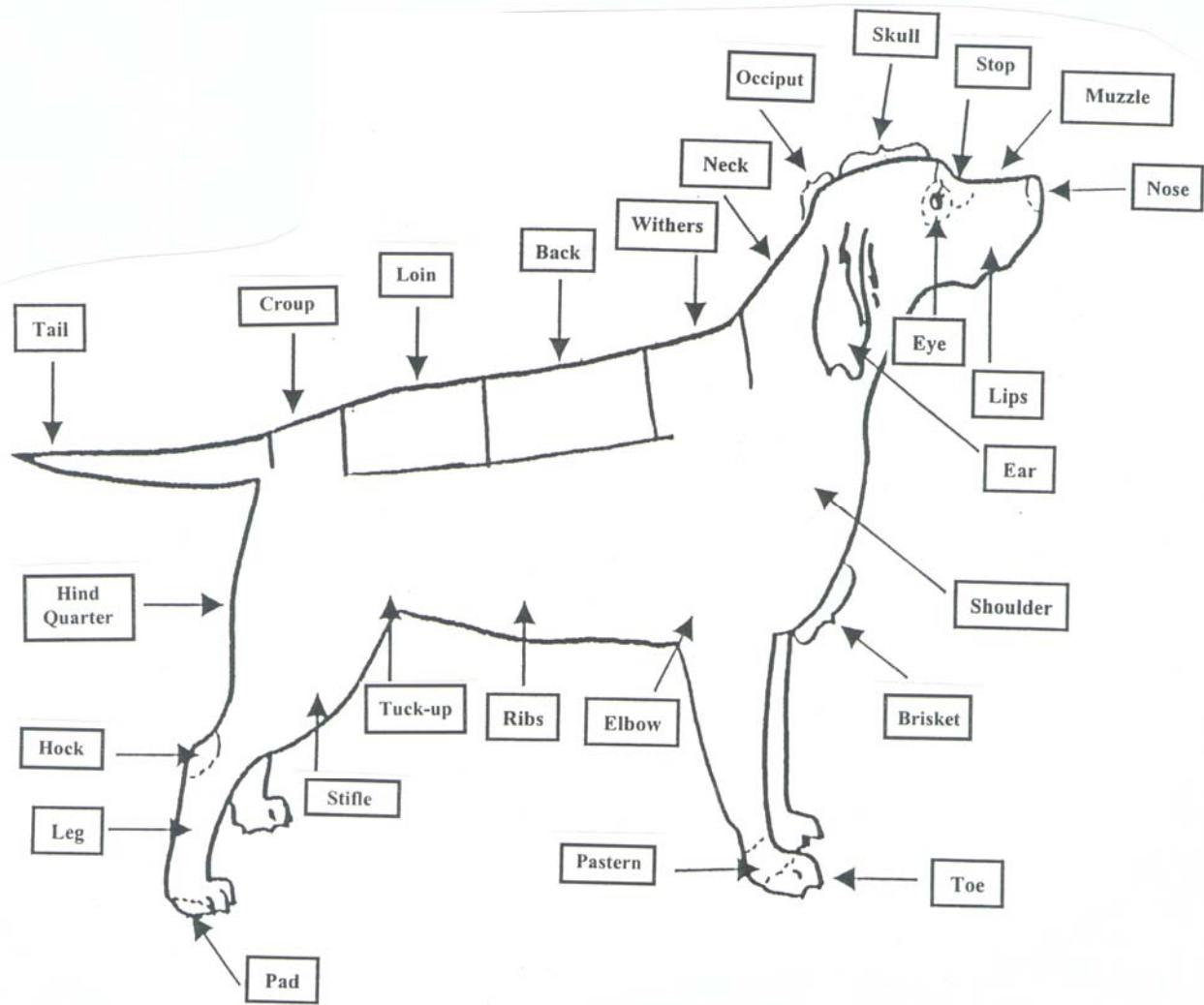
Seniors

(age 14 and over as of September 1, 2009)

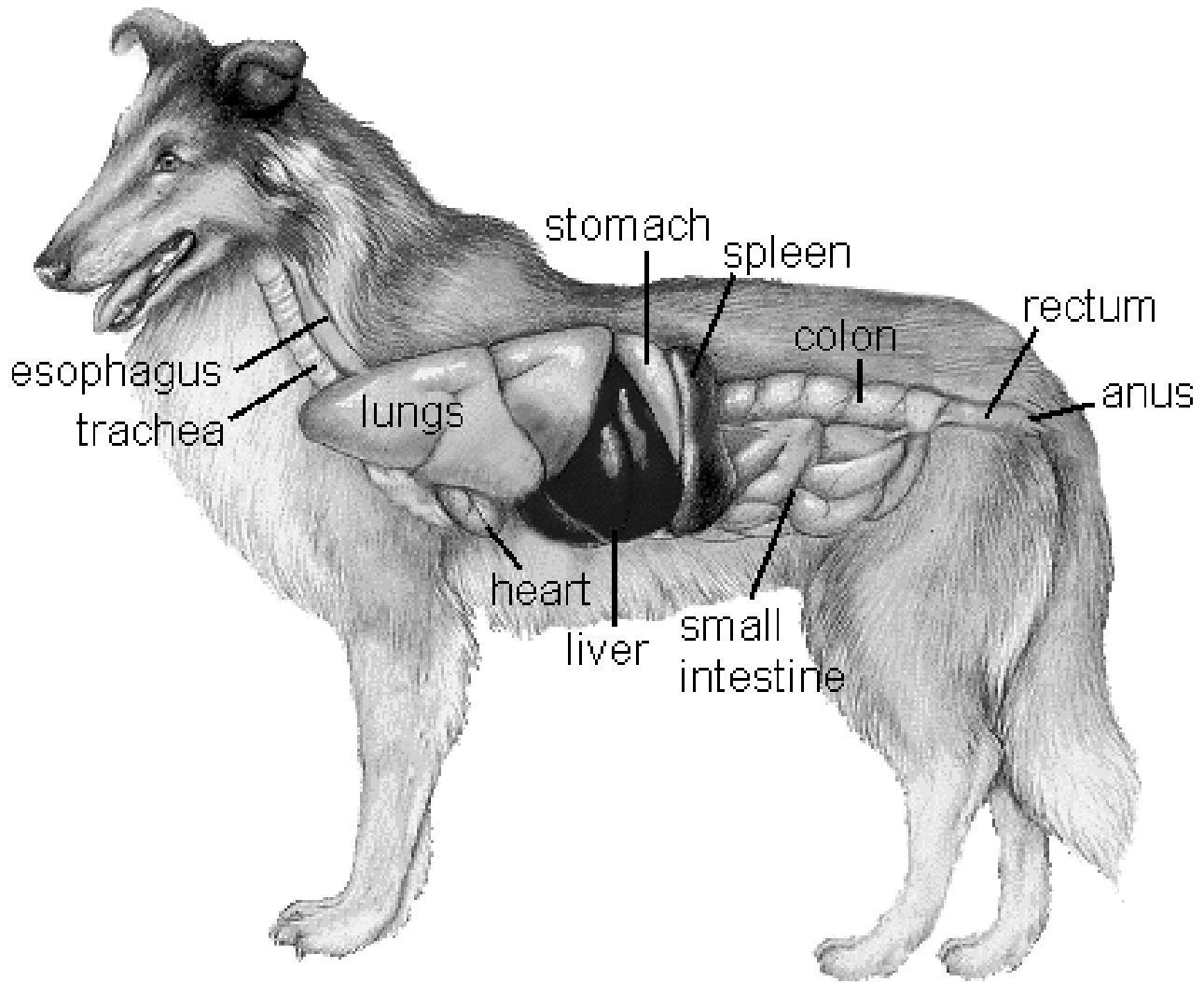
all of the above plus....
Proper Vaccinations for Dogs
How to Administer Common Medications
Common Canine Diseases and Vaccines
Medication Label Identification
Medical Calculations

Study well and GOOD LUCK

Dog External Body Parts



Dog Internal Body Parts



* Notice that the kidneys are not labeled on this picture. The kidneys are tucked up close to the liver toward the spine. Image modified from Hill's Pet Nutrition, Atlas of Veterinary Clinical Anatomy.

Above picture found at:

<http://www.vetmed.wsu.edu/clientED/anatomy/#Dog%20Anatomy>

Nail Trimming

The nails of a dog should be trimmed regularly to prevent ingrown nails, traumatic nail fractures, impaired walking from overgrown nails, broken toes, or nails growing into the pad of the foot. Trimming will also prevent damage to the animal's environment, such as scratching floors or tearing carpets. Various types of nail trimmers are available. The owner should choose the type they are most comfortable with. The nail contains a blood vessel called the "quick" (also spelled kwik) that will bleed if a nail is cut too short. The quick appears as a pink line running through the nail and ends at the edge of the nail. It usually does not go all the way to the tip, unless the nail has been just cut. Cutting the quick can be painful for the pet and may make them refuse or struggle with future nail trims. In the event of cutting the "quick" a cauterizing agent should be applied such as Quick Stop Powder. The nail should be cut cleanly and any frayed edges should be filed with a nail file or dremel. The nail trimmer should be placed within a few millimeters of the end of the quick and cut with a swift smooth motion. In the case of a pet with a black nail, when the quick is not visible, a small amount of nail should be gradually trimmed until a clearer or lighter color appears in the cross-section. This lighter colored area in the cross-section indicates the end of the quick. The remaining nails can be trimmed by using the first nail as a reference as to how much to trim. An alternative to cutting the nail is to "dremel" or file the nail until the quick is several millimeters from the end of the nail.

There are many websites that have pictures demonstrating nail trimming for your dog. Here is one that is recommended: http://www.vetmed.wsu.edu/ClientED/dog_nails.aspx and <http://homepages.udayton.edu/~merensjp/doberdawn/dremel/dremel.html> .

Types of nail trimmers



Scissor nail trimmer



Guillotine nail-trimmer



dremel

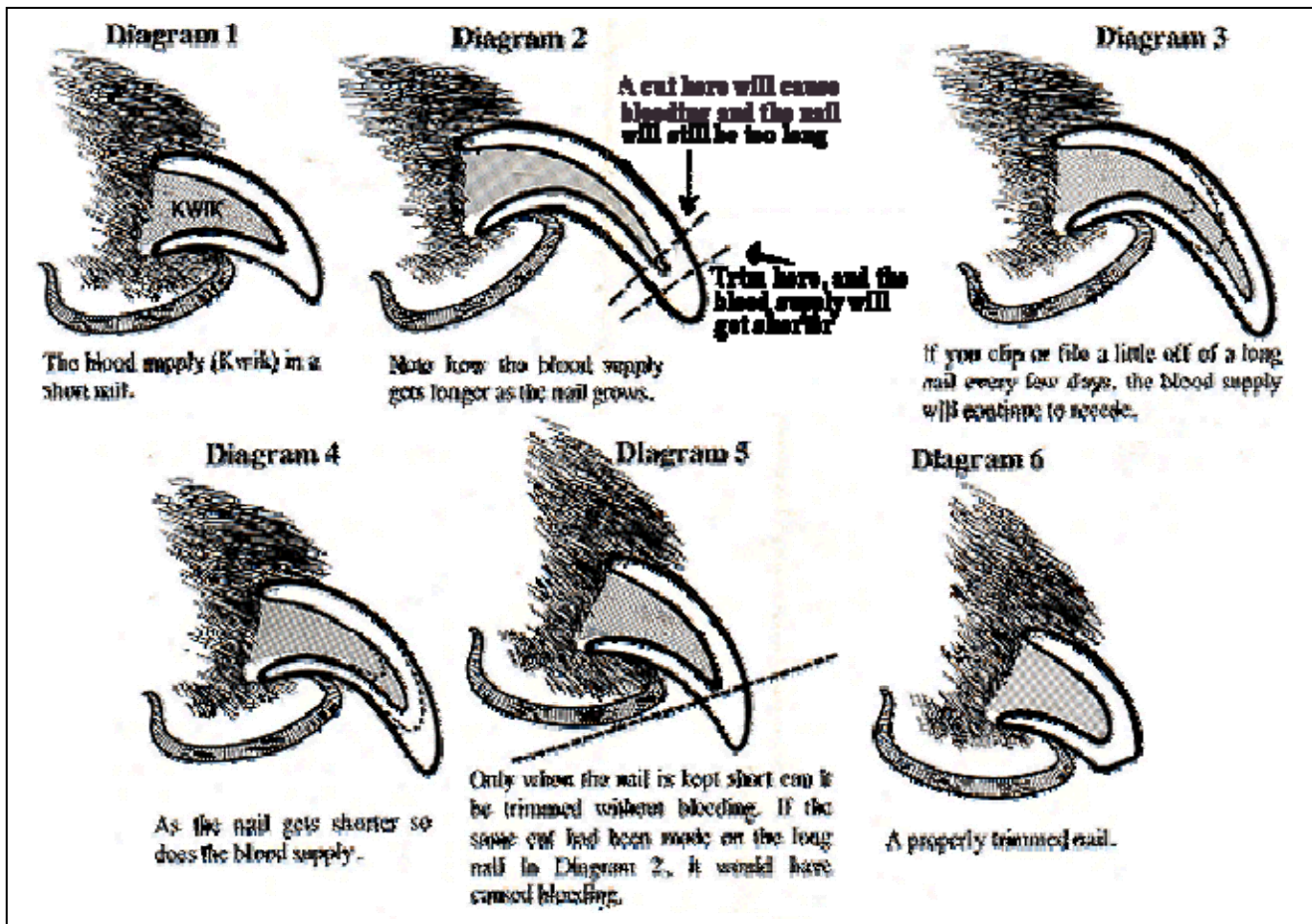
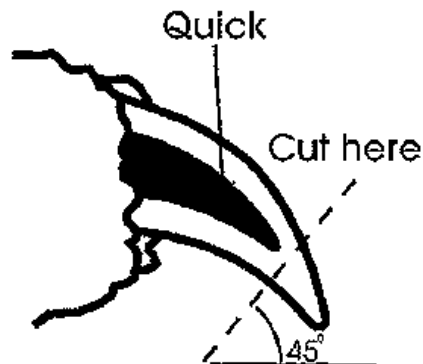


Diagram of dog's toenail and how to trim the toenail

Please note: alternate spelling for "quick" can be "kwik".

The above picture found at: <http://i212.photobucket.com/download-albums/cc204/broendogtreasures/nailcare.gif>

Nail cross section



The above picture

found at:

http://www.bamboopet.com/media/pdf/nc_english_1203.pdf

Ear Cleaning Procedure

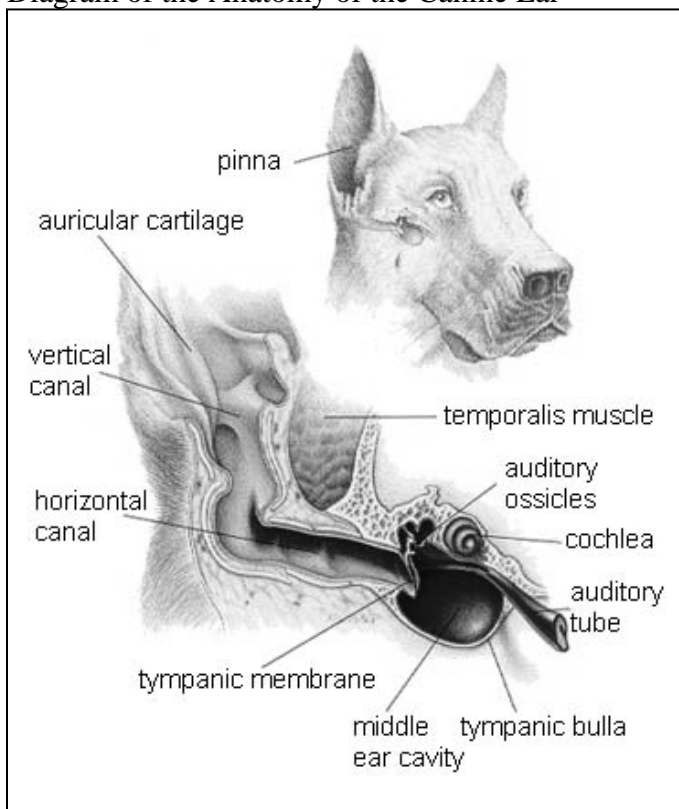
Ear cleaning is an important part of maintaining a dog's health and should be done regularly. The ear cleaning solution should include a drying solution so that the ear does not develop an infection from excess moisture remaining in the canal.

The proper procedure for cleaning should be used to prevent injury or infection and maintain proper health.

1. Put on a pair of latex or rubber exam gloves.
2. Gently tip the head so the ear is angled slightly up (toward the ceiling), grasp the pinna and place the solution into the ear canal.
3. Massage the base of the ear to distribute the cleaning solution and loosen any debris.
4. Use gauze pads to remove excess cleaning solution and debris.
5. Allow pet to shake its head to loosen more debris.
6. Use gauze pads to remove excess cleaning solution and debris.
7. Administer more solution into the ear canal.
8. Massage the base of the ear to distribute the cleaning solution and loosen any debris.
9. Use gauze to remove excess cleaning solution and debris.
10. Allow pet to shake its head to loosen more debris.
11. Use gauze for the external ear canal and interior of the pinna only.
12. Dry the ear canal with gauze pad to wipe out one last time.
13. Apply any necessary medication; massage the ear canal to distribute the medication.

*Cotton swabs are not recommended because if the dog moves suddenly the tip may damage the inner ear.

Diagram of the Anatomy of the Canine Ear



Juniors must be able to recognize and label:

- 1) pinna (outer ear also called the ear leather or flap)
- 2) vertical canal
- 3) horizontal canal
- 4) middle ear cavity

Intermediate and Seniors must be able to recognize and label any of the diagram.

<http://vetmedicine.about.com>

The pictures in this section are reprinted with permission by the copyright owner, Hill's Pet Nutrition, from the Atlas of Veterinary Clinical Anatomy.

Intermediates and Seniors

Health Instruments

Instruments may be needed in order to maintain a pet's health and monitor them if they are ill. Being familiar with these instruments and knowing how to use them correctly can be beneficial to a pet owner and help prevent potential problems.

Instrument	Description of Use
Muzzle	Restraint device to prevent a pet from biting.
Nail Trimmers	Instrument to cut excess length from the nail.
Rectal Thermometer	Instrument to determine the core body temperature.
Stethoscope	Instrument to monitor the chest, specifically the heart and lungs.
Toothbrush	Instrument to remove tarter and disinfect teeth and gums.

Medications

	Description of Use
Ear Cleaner	Solution to loosen and remove debris from the ear canal. (medication to be dispensed by veterinarian.)
Silver Nitrate	Powder to stop a nail from bleeding if the "quick" is cut.

Intermediates and Seniors

How to Give an Injection



Vaccines and many medications must be given by injection. When learning to give an injection, some owners may find it easier to practice on an orange or banana because fruit cannot feel pain. The discomfort that an animal getting a shot feels is similar to the discomfort that you feel when you get shots from your doctor. When giving an injection to an orange or banana, we must remember that it is somewhat different than giving an injection to a live animal. The live animal may move around and the skin may be harder to get the needle through.

There are two main types of injections - *subcutaneous* (Sub-Q) or *intramuscular* (I.M.). The subcutaneous injection is given just under the skin and the intramuscular injection is given within the muscle tissue. On your orange, the peel is comparable

to the skin on an animal, the orange sections are comparable to the muscles and the area in between these two is the comparable to the subcutaneous space.

To draw up an injection, wipe the vial top (rubber stopper) with an alcohol moistened cotton ball to disinfect it. Make certain the needle is securely attached to the syringe by inserting the plunger portion of the syringe into the open end of the syringe and twisting the needle onto the syringe tip. Remove the cap - do not touch the needle. Draw the plunger back to fill the syringe with an amount of air equal to the amount of vaccine you want to inject. Push the needle (with syringe) through the rubber stopper of vaccine and inject air - this prevents a vacuum from forming as you draw the vaccine out. Turn the vaccine vial (with needle/syringe still inserted) upside down, and draw out the desired amount of vaccine. Turn vial right-side up, remove needle/syringe, and cap needle until ready to use.

To give a subcutaneous injection:

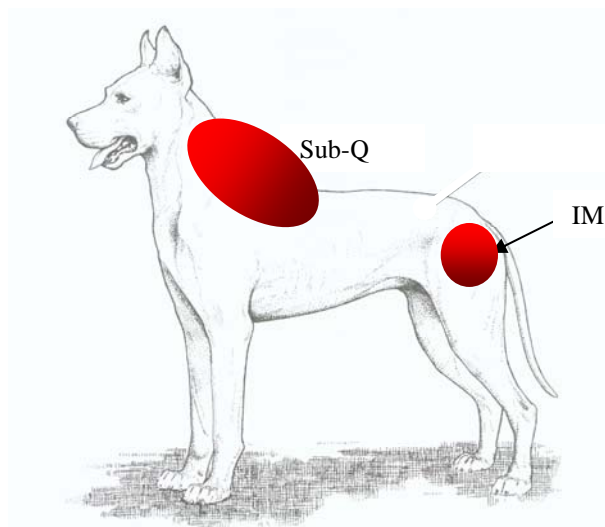
Place the needle just under the skin by picking up a fold of skin behind the dog's head, halfway between its shoulder blades. Gently lift the skin until it is raised in an inverted "v" (also described as a "tent" of skin). Insert the needle ½ way, and push the plunger to expel the injection into the animal.

To give an intramuscular injection:

The needle must penetrate the muscle. Draw up the material as described above. Injections are given in the lateral region of the thigh. Gently insert the needle into the muscle, pull back slightly to make sure you are not in a vein, and then slowly push on the plunger of the syringe. When the syringe is empty, remove the needle and syringe from the animal making sure that the needle is still attached and replace the cap to prevent injury. You may gently rub the area to comfort the dog.

Always use sterile equipment as dirty equipment could cause infections at the injection site. Remember to dispose of all needles and biological wastes properly. It is important that you consult your veterinarian before giving any shots and always READ THE LABEL and FOLLOW INSTRUCTIONS. Proper animal identification and record keeping are vital components of your project. Remember to always WRITE IT DOWN.

Dog Injection Sites



Common Internal Parasites and Symptoms

Dogs, especially puppies, are susceptible to internal parasites. Parasites are small organisms that live within an animal's body and feed off of the host. The most common internal parasites are heartworms, which live in the heart and bloodstream, and intestinal parasites that live within the digestive tract. Medications are available to treat a pet if they become infected; and, there are monthly preventatives that can be given to ensure a dog does not become infested. The way an animal becomes infested is different from each type of parasite and is called the route of infection. In order to check for these parasites a veterinarian must take a blood or stool sample and examine the sample in a laboratory. The fecal sample will contain the eggs of the intestinal parasites and a blood sample would have baby heartworms. If not treated a dog can become very ill and possibly die. The time from which an animal becomes infected to the time that the parasites start reproducing is called the pre-patent period. The laboratory results will only be positive after the pre-patent period. Therefore, it is possible for a dog to be showing symptoms of a parasite without testing positive. Common symptoms related to these parasites are coughing, vomiting, diarrhea, and anemia.

Canine Internal Parasites

Internal Parasite	Route of Infection	Pre-patent Period
Heartworms	Mosquito bite	6 – 8 months
Tapeworms	Ingestion of an infected flea	3 weeks
Threadworms	ingestion of egg	8 – 14 days
Roundworms	Ingestion of egg (in puppies passed from mother in the milk)	3 – 5 weeks
Hookworms	Skin Penetration or ingestion of of larvae	2 – 3 weeks
Whipworms	Ingestion of egg	3 months
Coccidia	Ingestion of immature egg or eating infected rodents such as mice or squirrels	4 – 12 days
Giardia	Ingestion of infectious cysts	6 – 10 days

Proper Vaccinations for Dogs

AVMA Vaccination Recommendations for Dogs Puppy Vaccination Schedule	
Age	Vaccination
5 weeks	Parvovirus: for puppies at high risk of exposure to parvo, some veterinarians recommend vaccinating at 5 weeks. Check with your veterinarian.
6 & 9 weeks	Combination vaccine* without leptospirosis. Coronavirus: where coronavirus is a concern.
12 weeks or older	Rabies: Given by your local veterinarian (age at vaccination may vary according to local law).
12-16 weeks**	Combination vaccine Leptospirosis: include leptospirosis in the combination vaccine where leptospirosis is a concern, or if traveling to an area where it occurs. Coronavirus: where coronavirus is a concern. Lyme: where Lyme disease is a concern or if traveling to an area where it occurs.
Adult (boosters) [§]	Combination vaccine Leptospirosis: include leptospirosis in the combination vaccine where leptospirosis is a concern, or if traveling to an area where it occurs. Coronavirus: where coronavirus is a concern. Lyme: where Lyme disease is a concern or if traveling to an area where it occurs. Rabies: Given by your local veterinarian (time interval between vaccinations may vary according to local law).

*A combination vaccine, often called a 5-way vaccine, usually includes adenovirus cough and hepatitis, distemper, parainfluenza, and parvovirus. Some combination vaccines may also include leptospirosis (7-way vaccines) and/or coronavirus. The inclusion of either canine adenovirus-1 or adenovirus-2 in a vaccine will protect against both adenovirus cough and hepatitis; adenovirus-2 is highly preferred.

**Some puppies may need additional vaccinations against parvovirus after 15 weeks of age. Consult with your local veterinarian.

[§] According to the American Veterinary Medical Association, dogs at low risk of disease exposure may not need to be boosted yearly for most diseases. Consult with your local veterinarian to determine the appropriate vaccination schedule for your dog. Remember, recommendations vary depending on the age, breed, and health status of the dog, the potential of the dog to be exposed to the disease, the type of vaccine, whether the dog is used for breeding, and the geographical area where the dog lives or may visit.

Bordetella and parainfluenza: For complete canine cough protection, we recommend Intra-Trac III ADT. For dogs that are shown, in field trials, or are boarded, we recommend vaccination every six months with Intra-Trac III ADT.

<http://www.peteducation.com/article.cfm?c=2+1648&aid=960>

How to Administer Common Medicines

Oral Medications

Pills – Open your dog's mouth and drop the pill down as far back as you can, on top of and in the center of the tongue. Close the dog's mouth and hold it to shut while stroking the throat until your dog swallows. It licks its nose, chances are that it swallowed the pill. Giving it a treat afterwards helps insure that the pill is swallowed. You can try hiding the pills in a treat, say cheese or peanut butter. Pill plungers work well also.

Liquids – Tilt the chin up at 45 degrees, and place the neck of the bottle into the cheek pouch, between the molar teeth and the cheek. Seal the lips around it with your fingers and pour in the liquid. Large amounts can be given this way. Hold muzzle firmly while the dog swallows. Bottles, syringes and eyedroppers can be used. Your vet can help you out here.

Eye Medications – Eye medications are either in a liquid or ointment form. Cradle the dogs head in one hand and gently use your thumb to hold down the lower eyelid. Hold the medication in the other hand and squeeze or drop the medicine in the pouch created by moving the lower lid. If you must administer eye drops to your dog and it resists, try the following trick: stand behind your dog and hold the eye open to administer the drops. This may help your dog feel more at ease, and less anxious. Gently message the eye after closing it.



<http://www.drsfostersmith.com/pic/article.cfm?aid=1448>

Ear Medications – Ear medications are either liquid or ointment form. Ear should be cleaned first, see previous section for method to clean. Be careful, due not put tube too far into the ear, this could hurt the eardrum (tympanic membrane). Either ear drops or ointment should be placed a few millimeters into the ear canal, then gently message the base of the ear to distribute the medicine.

Common Canine Diseases and Vaccines

Against which diseases should puppies be vaccinated?

The AVMA Council on Biologic and Therapeutic Agents' Report on Cat and Dog Vaccines has recommended that the core vaccines for dogs include distemper, canine adenovirus-2 (hepatitis and respiratory disease), canine parvovirus-2, and rabies.

Noncore vaccines include leptospirosis, coronavirus, canine parainfluenza and *Bordetella bronchiseptica* (both are causes of 'kennel cough'), and *Borrelia burgdorferi* (causes Lyme Disease). Consult with your veterinarian to select the proper vaccines for your puppy.

AVMA Vaccination Recommendations for Dogs

Component	Class	Efficacy (effectiveness)	Length of Immunity	Risk/Severity of Adverse Effects (of vaccination)	Comments
Canine Distemper	Core	High	> 1 year for modified live virus (MLV) vaccines	Low	
Measles	Noncore	High in preventing disease, but not in preventing infection	Long	Infrequent	Use in high risk environments for canine distemper in puppies 4-10 weeks of age
Parvovirus	Core	High	> 1 year	Low	
Hepatitis	Core	High	> 1 year	Low	Only use canine adenovirus-2 (CAV-2) vaccines
Rabies	Core	High	Dependent upon type of vaccine	Low to moderate	
Respiratory disease from canine adenovirus-2 (CAV-2)	Noncore	Not adequately studied	Short	Minimal	If vaccination warranted, boost annually or more frequently
Parainfluenza	Noncore	Intranasal MLV - Moderate Injectable MLV - Low	Moderate	Low	Only recommended for dogs in kennels, shelters, shows, or large colonies; If vaccination warranted, boost annually or more

					frequently
Bordetella	Noncore	**Intranasal MLV - Moderate ***Injectable MLV - Low	Short	Low	For the most benefit, use intranasal vaccine 2 weeks prior to exposure
Leptospirosis	Noncore	Variable	Short	High	Up to 30% of dogs may not respond to vaccine
Coronavirus	Noncore	Low	Short	Low	Risk of exposure high in kennels, shelters, shows, breeding facilities
Lyme	Noncore	Appears to be limited to previously unexposed dogs; variable	Revaccinate annually	Moderate	

<http://www.peteducation.com/article.cfm?c=2+1648&aid=960>

***Core Vaccines versus Non-Core Vaccines**

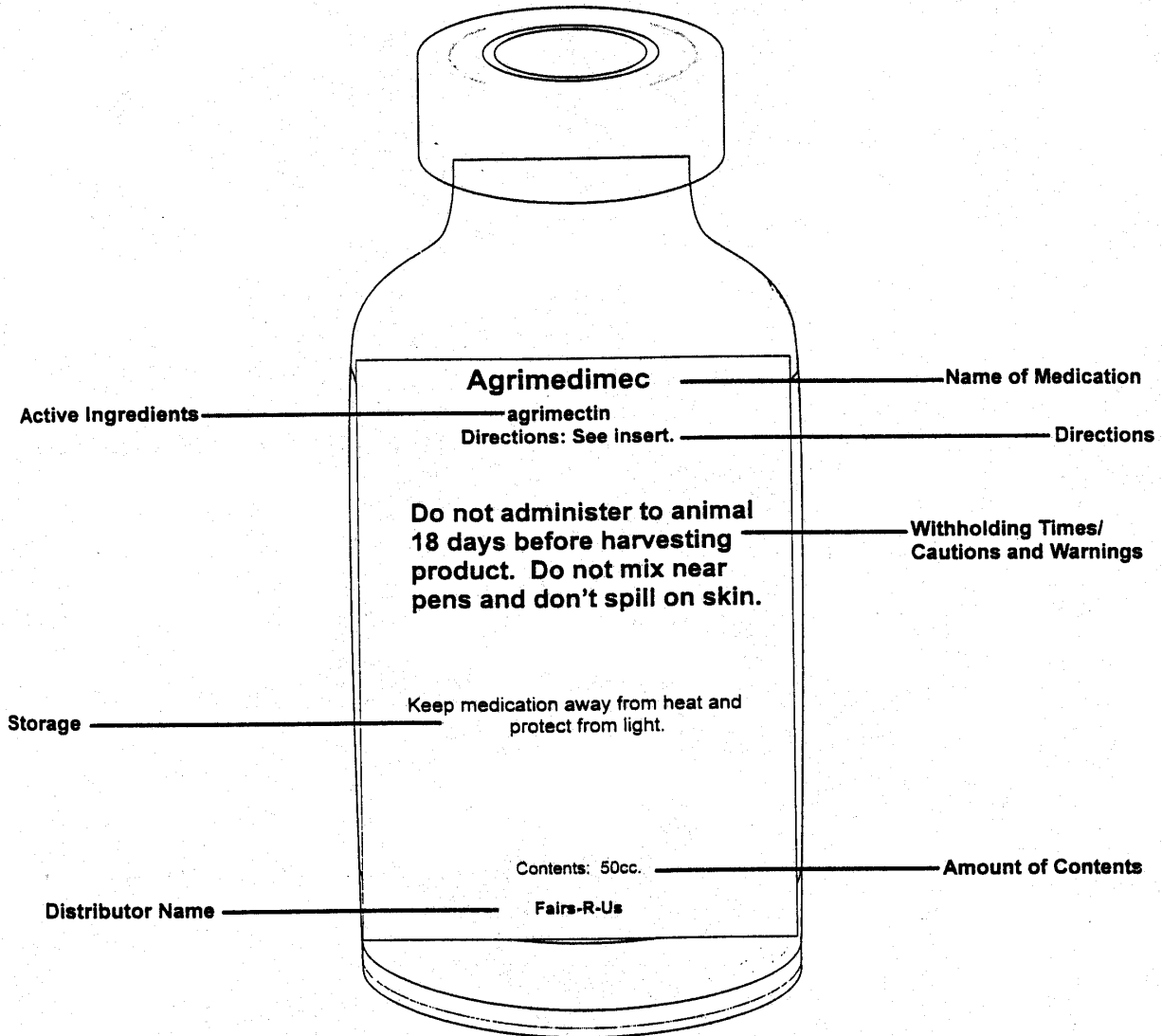
Those vaccines that are thought to be essential to maintain your dog's health are called **Core vaccines**. Vaccines that are not considered necessary, but may be given when animal is exposed to the disease are called **Non-core dog vaccines**.

**Intranasal – in the nose

***Injectable – given in a shot

Medication Labels

Manufacturers of pharmaceutical products follow strict guidelines in labeling their products. Understanding what is on the label and how to use the information is a critical skill for livestock health care management. Using the picture shown here, study the labels on the products you routinely use on your project animals.



*A good resource for the medicine is the package insert; it has indications and contraindications for the uses of the drug.

The use of trade names in this publication is solely for the purpose of providing specific information. It is not a guarantee, warranty, or endorsement of the products named and does not signify that they are approved to the exclusion of others.

Medication Calculations

Be prepared to read a medication label and calculate when to administer vaccines, booster shots, worm medicines, etc.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

The abbreviation needed to interpret a medication label includes the following:

SID – 1 time daily
BID – 2 times daily
TID – 3 times daily
QID – 4 times daily
EOD – every other day
PO – medicine is given orally
C – capsule
T – tablet
d – day

- Most wormers will require a repeat dose in three weeks (ex. Virbantal, drontal plus, panacur). Whip worm medication is repeated in 3 weeks and 3 months.
- Some drugs such as steroids may be given with a “tapering dosage”. For example, 1 tablet two times daily for 5 days, then 1 tablet one time daily for 5 days, then 1 tablet every other day until gone. This would be written as: 1T BID x 5d. then 1T SID x 5d, then 1T EOD until gone.

This information is provided to help you with Junior Showmanship; it is not part of the skilathon.

SHOWMANSHIP

Participation in Junior Showmanship is intended to encourage Juniors to learn how to care for and present different dog breeds. Junior showmanship classes are judged on the ability of the Junior to handle his or her dog. The quality of the dog is not judged. Juniors are will be asked to demonstrate:

1. moving the dog with the rest of the class
2. presenting the dog in the standing position proper to its breed (including the use of the examining table for those breeds normally judged on a table).
3. moving the dog individually in a regular pattern

Juniors are expected to know basic ring routines. They should be able to follow directions, use space wisely, and be familiar with gaiting patterns. Juniors should appear “ring wise”, alert to what is going on in the ring, and should be prepared for changes in the routine of judging. Juniors must be able to control their dogs at all times.

Juniors should be clean, neat, and well groomed. They should wear clothing that is comfortable to handle in and appropriate for dog shows. Clothing should not distract, limit or hinder the judge’s view of the dog.

Dogs should be groomed and trimmed, as they would be for the breed ring. Judges will not evaluate the quality of the grooming and trimming, but Juniors should make an effort to prepare their dogs properly.

Juniors should appear confident, prepared, business-like and attentive. They should be courteous to both the judge and other handlers. Juniors are expected to handle their dogs without disturbing the dogs of the other juniors. Handlers should not crowd and they should not distract others by continued use of toys and bait. Handlers should be alert to the needs of their dogs. They should use firm but thoughtful hands in controlling and handling of their dogs. Juniors should not be impatient or heavy-handed.

Juniors will be judged on their ability to make their individual dog look its best in both pose and motion.

Junior handlers should:

1. keep their dog’s attention without using dramatic or unnecessary movements.
2. gait their dogs in a controlled trot without distracting or interfering with the judge’s view of the dog.
3. be aware of what is going on in the ring.
4. concentrate on their dog and not the judge, but be aware of where the judge is at all times.
5. Junior Handlers who use exaggerated posture, motions or gestures in any part of the competition will be faulted