

Canine Anatomy and Physiology (A&P) Course

Module Title: The Canine Systems		Date: 01/16/2024	
Product Deliverable(s): <input checked="" type="checkbox"/> Preliminary Design Document <input type="checkbox"/> Instructional Module <input type="checkbox"/> Detailed Design Document <input checked="" type="checkbox"/> Practical Exercise <input type="checkbox"/> Pre-Test <input type="checkbox"/> Answer Keys		Design Team: PM: Lead ISD: Anne-Marie Fiore, Ed.D. Lead Developer: Media Production Manager: Lead QA:	
Proponent: MEDCOE/DOTD		Courseware Link (if applicable):	
Version number: 1.0	Phase: <input checked="" type="checkbox"/> Preliminary Design <input type="checkbox"/> Individual Trials <input type="checkbox"/> Final Design <input type="checkbox"/> Group Trials <input type="checkbox"/> Alpha IMI <input type="checkbox"/> Final Packaging <input type="checkbox"/> Final IMI		
TLO(s):	TLO 26: Identify the anatomical nomenclature of anatomy and the structure and physiology of canine systems. TLO 27: Identify common field injuries that occur to military working dogs (MWDs).		
ELO(s):	N/A		

1.0 Assessment Module Introduction Components

Title (Slide 1)

The Canine Systems

Objectives (Slide 2)

TLO 26: Canine Anatomy and Physiology

Action Statement

Identify the anatomical nomenclature of anatomy and the structure and physiology of canine systems.

Condition Statement

In a computer-based learning environment, given animated graphics and interactive multimedia instruction.

Standard Statement

Identify the components, characteristics, and functions of the canine body IAW Comparative Veterinary Anatomy: A Clinical Approach, 2022, with 80% accuracy.

TLO 27: Common Field Injuries

Action Statement

Identify common field injuries that occur to military working dogs (MWDs).

Condition Statement

In a computer-based learning environment, given animated graphics of the canine body, realistic imagery, and interactive multimedia instruction.

Standard Statement

Identify common field injuries that occur to working military working dogs (MWDs) IAW Clinical Practice Guidelines for Military Working Dogs (CPG ID: 16) with 80% accuracy.

Introduction (Slide 3)

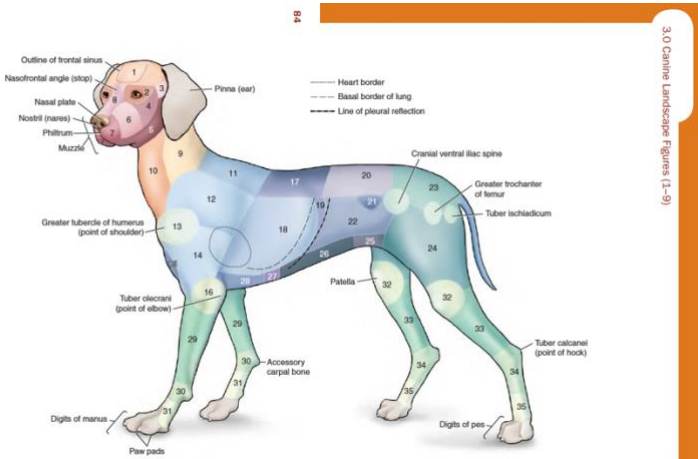
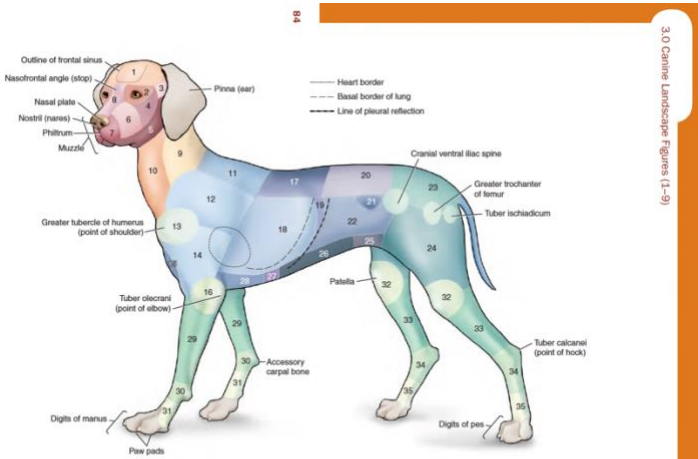
Welcome to the Canine Anatomy and Physiology Practical Exercise! Your objective is to test your knowledge of the canine anatomy and physiology. You'll be given questions in either multiple-choice or "click and drop" format. Don't worry, all questions and answers will be shuffled randomly to keep it interesting. To pass this exercise, you need at least 80% correct answers. You can try as many times as you need to pass. When you're ready, click Begin Exercise to start. Have fun testing your knowledge of canine anatomy and physiology.

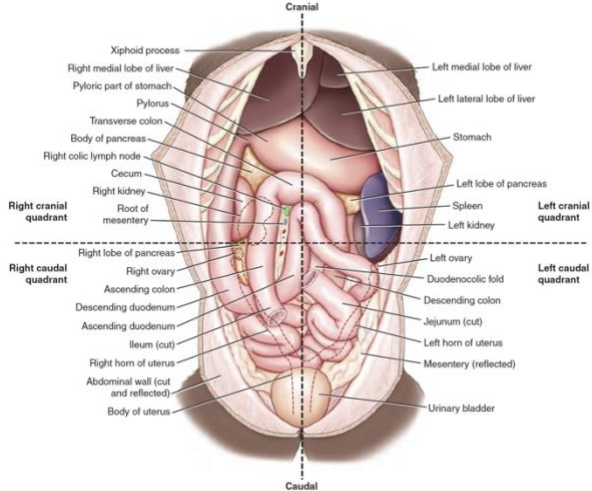
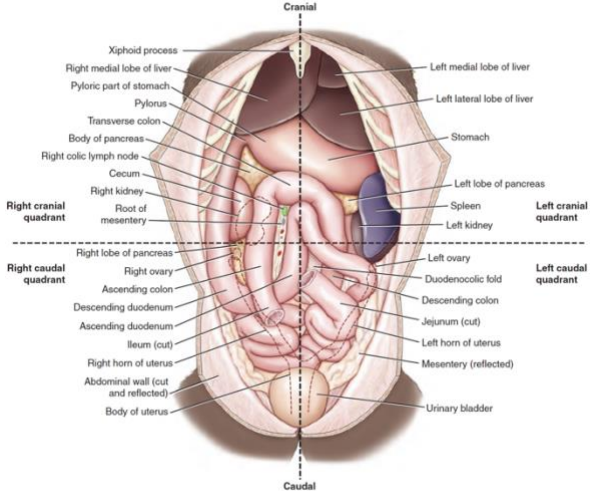
2.0 Assessment Questions

For development: Question types will be listed in the first column. For multiple choice, users will select a single answer and then move on to the next question. For click and drop, users will select an option and drop it to its corresponding position on the screen. For sequencing, users will select an option and drop it to its corresponding position on the screen to be in the correct sequence. Questions will be randomized for the practical exercise. Answer choices will also be randomized.



TLO 26: Identify the anatomical nomenclature of anatomy and the structure and physiology of canine systems.

Question Type	Question and Answer Choices	Correct Answer
Click and Drop	<p>Label the parts of canine anatomy.</p>  <p>(Orsini et al., 2022, fig. 3A-1)</p> <p>Note to Media: Remove the terms on 1-10. Leave the lines intact.</p>	<p>(Answers are shown in the graphic.)</p>  <p>FIGURE 3A-1 Regional canine anatomy. Canine anatomical regions: 1, frontal; 2, orbital; 3, temporal; 4, zygomatic; 5, mandibular; 6, incisive (premaxillary); 7, maxillary; 8, nasal; 9, ventral cervical; 10, dorsal cervical; 11, interscapular; 12, thoracic appendage; 13, shoulder; 14, brachial; 15, prestermal; 16, elbow; 17, axillary (back); 18, costal; 19, hypochondriac; 20, lumbar (back); 21, paralumbar fossa; 22, lateral abdominal; 23, sacral (croup); 24, femoral; 25, prepubic; 26, umbilical; 27, inguinal; 28, sternal; 29, antebrachial (forearm); 30, carpal; 31, metacarpal; 32, stifle (knee); 33, crural (leg/gaiter); 34, tarsal (hock); 35, metatarsal.</p>

Question Type	Question and Answer Choices	Correct Answer
Click and Drop	<p>Label the quadrants of the canine abdominal cavity.</p>  <p>FIGURE 3A-8 Ventral view of the canine abdominal cavity.</p> <p>(Orsini et al., 2022, fig. 3A-8)</p> <p>Note to Media: Remove the labels of the quadrants. Leave the lines intact.</p>	<p>(Answers are shown in the graphic.)</p>  <p>FIGURE 3A-8 Ventral view of the canine abdominal cavity.</p> <p>(Orsini et al., 2022, fig. 3A-8)</p>
Multiple Choice	<p>What is the normal resting heart rate for a healthy adult dog?</p> <p>a. 40-60 bpm b. 60-100 bpm c. 80-120 bpm d. 100-140 bpm</p>	b. 60-100 bpm
Multiple Choice	<p>Which part of a dog's anatomy is responsible for their acute sense of smell?</p>	b. Jacobson's organ

Question Type	Question and Answer Choices	Correct Answer
	a. Whiskers b. Jacobson's organ c. Ear canals d. Paw pads	
Multiple Choice	What type of joint is the hip joint in canines? a. Hinge joint b. Pivot joint c. Ball and socket joint d. Saddle joint	c. Ball and socket joint
Multiple Choice	Canines have a third eyelid, known as the nictitating membrane. What is its primary function? a. Night vision b. Protection and additional moisture c. Detecting colors d. Enhancing peripheral vision	b. Protection and additional moisture
Multiple Choice	The canine skeletal system consists of approximately how many bones? a. 206 b. 270 c. 320 d. 360	c. 320
Multiple Choice	In dogs, the largest portion of their brain is dedicated to which sense? a. Hearing	c. Smell

Question Type	Question and Answer Choices	Correct Answer
	b. Sight c. Smell d. Touch	
Multiple Choice	What is the primary function of a dog's whiskers? a. Sensing vibrations b. Regulating body temperature c. Expressing emotions d. Enhancing smell	a. Sensing vibrations
Multiple Choice	Dogs have a unique part in their ears that helps them hear high-frequency sounds. What is it called? a. Auditory canal b. Pinna c. Cochlea d. Eustachian tube	b. Pinna
Multiple Choice	What structure in the canine eye enhances night vision? a. Cornea b. Lens c. Retina d. Tapetum lucidum	d. Tapetum lucidum
Multiple Choice	Which type of teeth in dogs are primarily used for tearing meat? a. Incisors b. Canines c. Premolars d. Molars	c. Premolars
Multiple Choice	The canine respiratory system includes a specific structure that helps in heat exchange. What is it called?	c. Nasal turbinates

Question Type	Question and Answer Choices	Correct Answer
	a. Trachea b. Bronchi c. Nasal turbinates d. Lungs	
Multiple Choice	What part of the canine digestive system is significantly shorter compared to herbivores? a. Esophagus b. Small intestine c. Stomach d. Large intestine	d. Large intestine
Multiple Choice	Dogs are capable of understanding how many words and gestures, approximately? a. 10-20 b. 30-50 c. 100-200 d. Over 250	c. 100-200
Multiple Choice	In dogs, what is the purpose of the dewclaw? a. Balance during running b. Digging c. Traction on slippery surfaces d. Minimal functional purpose	d. Minimal functional purpose
Multiple Choice	How many chambers does a dog's heart have? a. 2 b. 3 c. 4 d. 5	c. 4



TLO 27: Identify common field injuries that occur to military working dogs (MWDs).

Question Type	Questions and Answer Choices	Correct Answer
Multiple Choice	What is the most common type of injury sustained by MWDs in the field? a. Thermal injuries b. Lacerations c. Bone fractures d. Tendonitis	b. Lacerations
Multiple Choice	Which condition is a result of prolonged high activity without adequate rest for MWDs? a. Heatstroke b. Hypothermia c. Arthritis d. Muscle atrophy	a. Heatstroke
Multiple Choice	During operations in cold environments, MWDs are at risk for which of the following? a. Heatstroke b. Frostbite c. Dehydration d. Overexertion	b. Frostbite
Multiple Choice	What type of field injury can occur due to improper handling or accidents involving military vehicles? a. Sprains b. Thermal injuries c. Crush injuries d. Abrasions	c. Crush injuries

Question Type	Questions and Answer Choices	Correct Answer
Multiple Choice	How can MWDs sustain acoustic trauma? a. High-pitched whistles b. Exposure to loud explosions c. Frequent barking d. Ultrasonic devices	b. Exposure to loud explosions
Multiple Choice	What is a common injury MWDs can suffer from when deployed in urban areas? a. Pad burns b. Snake bites c. Gunshot wounds d. Allergic reactions	a. Pad burns
Multiple Choice	What type of injury is characterized by a partial tear in a ligament in MWDs? a. Strain b. Sprain c. Dislocation d. Subluxation	b. Sprain
Multiple Choice	Which injury occurs due to overextension of the joints in the hind legs of MWDs? a. Hip dysplasia b. Stifle injury c. Elbow dysplasia d. Patellar luxation	b. Stifle injury

Question Type	Questions and Answer Choices	Correct Answer
Multiple Choice	In MWDs, what is the term for the injury caused by a foreign object penetrating the paw? a. Incision b. Laceration c. Puncture d. Contusion	c. Puncture
Multiple Choice	An MWD with a sudden inability to bear weight on a limb might be suspected of having which injury? a. Bruising b. Cramps c. Fracture d. Myositis	c. Fracture
Multiple Choice	What is the primary concern for MWDs with open wounds in a field environment? a. Hair loss b. Blood loss c. Infection d. Scar formation	c. Infection
Multiple Choice	Which of the following is a common heat-related injury for MWDs in hot climates? a. Hypothermia b. Heatstroke c. Frostbite d. Trench foot	b. Heatstroke

Question Type	Questions and Answer Choices	Correct Answer
Multiple Choice	For MWDs, what is the typical immediate treatment for a suspected fracture in the field? a. Ice and heat treatment b. Surgical intervention c. Immobilization d. Antibiotic administration	c. Immobilization
Multiple Choice	Which injury is common among MWDs due to the intense physical demands of their work? a. Dental fractures b. Ear infections c. Eye ulcers d. Tail injuries	a. Dental fractures
Multiple Choice	An MWD that presents with difficulty breathing after an impact may have suffered what type of injury? a. Diaphragmatic hernia b. Laryngeal paralysis c. Tracheal collapse d. Bronchitis	a. Diaphragmatic hernia



3.0 Conclusion and Pass/Fail Strategies

Upon completion of the assessment questions, show a conclusion screen that grades the attempt and takes the following into account:

- Success Requirements:
 - Success will be determined by completing each section of the PE with at least 80% accuracy.
- Success on screen text:
 - You have successfully completed this practical exercise. The module is now complete. Return to JKO to finish any other uncompleted modules.
- Failure on screen text:
 - Your attempt at completing this section of the practical exercise was not successful. Your score was [final point score]. You may return to the patient list and reselect this patient to make another attempt. You may also decide to review the content, but keep in mind that if you leave this window, your progress will be lost.