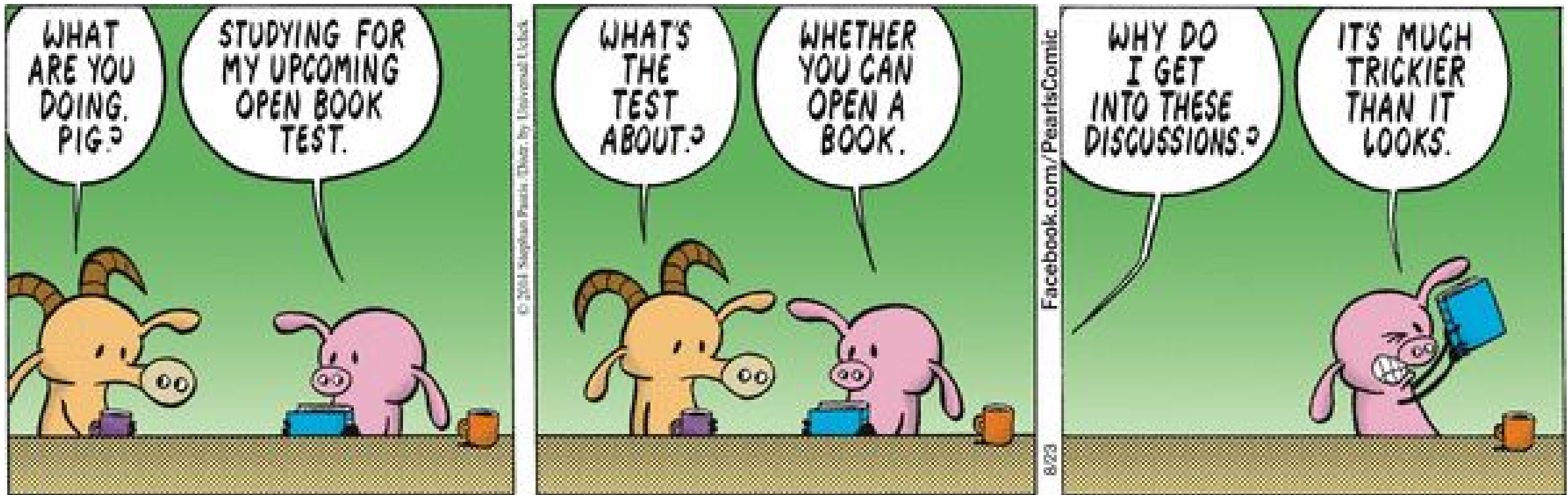


Open Book Exams

Concepts and Ideas



New England Journal of Medicine Comments:



Life is an OPEN BOOK test.

Don't worry if you don't know an answer. What matters is if you know how to FIND the information.

www.TheEngineeringMentor.com

- Nobody expects doctors to recall every symptom of every disease, nor every contraindication for every drug.
- Researchers have shown that most people find open-book tests **less stressful** than closed-book tests.
- Reported effects on performance and retention (closed vs. open book) are **mixed**.

Design Notes: Washington Univ. of St Louis

- In the honor policy, clearly indicate it is an open book exam and list what references the students can and can't use (e.g., no "phone a friend").
- Consider your grading capacity. Do you have time to grade short answers?
- Realize that questions will be readily available to future students.
- Randomize question order (except for linked questions) to reduce cheating.
- Avoid questions that can be directly Googled.
- Use questions that are clear and unambiguous & have someone review them.
- Focus on questions that require application, analysis, or evaluation.
- For multiple choice questions, write complex scenario-based questions.

Crafting a Good Exam

<https://vetmed.tennessee.edu/academics/Documents/Open%20Book%20Exams%20Presentation%20062520.pdf> : Misty Bailey UTCVM MTP Talk

- Ask questions that require students to apply information to unique new situations.
- Asks questions that require synthesis of multiple pieces of knowledge.
- Provide mini case studies and ask questions related to them.
- Ask students to predict the outcome based on an action or a “what if” scenario.
- Ask students to identify an example of a concept or principle.
- Include a chart or table and ask students to interpret it.
- Provide a more complex problem and ask them to calculate a solution.



Multiple Choice Question Headers

- Which of the following is an example of....
- Based on the case study above, which of the following is...
 - The most likely cause of...
 - The preferred diagnostic test....
 - The most appropriate treatment....
- Which of the following best exemplifies the principle of....
- Which of the following is the most likely interpretation of....
- What effect would X have on....
- Which of the following is the best method for...
- Which explanation provides the strongest argument for...
- What other factor(s) could affect the data?



@marketoonist.com

Decide: Does it matter if the images or examples are readily available on the internet or in class?

Picking from a List

- a. Metabolic Acidosis
- b. Metabolic Alkalosis
- c. Respiratory Acidosis
- d. Respiratory Alkalosis
- e. Compensated metabolic acidosis
- f. Compensated metabolic alkalosis
- g. Compensated respiratory acidosis
- h. Compensated respiratory alkalosis

Possible answers include all options.

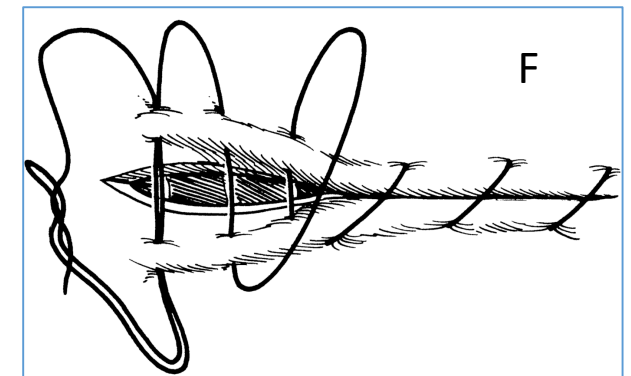
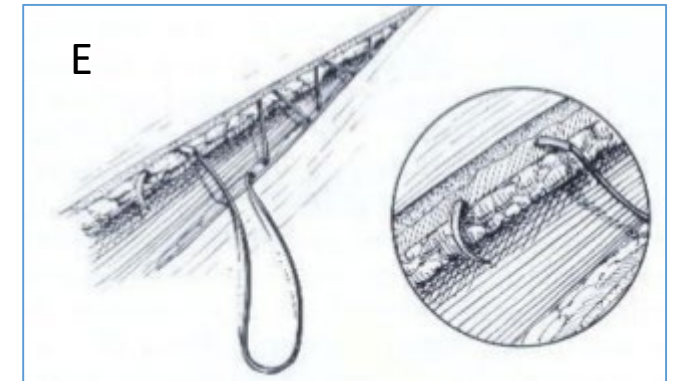
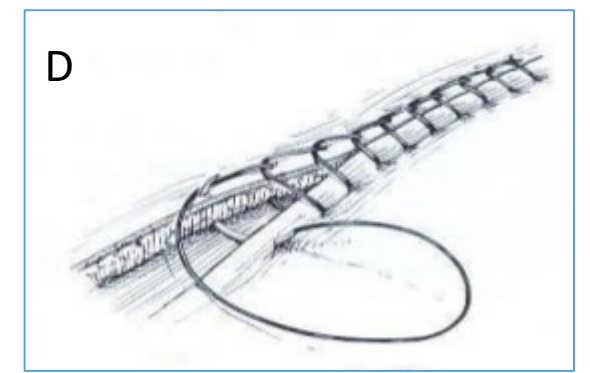
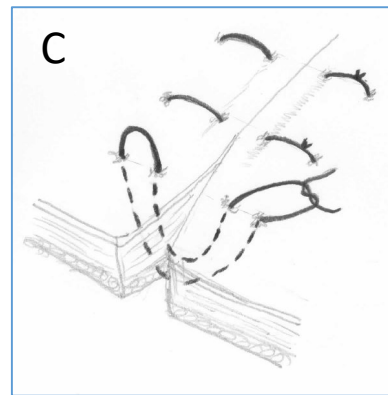
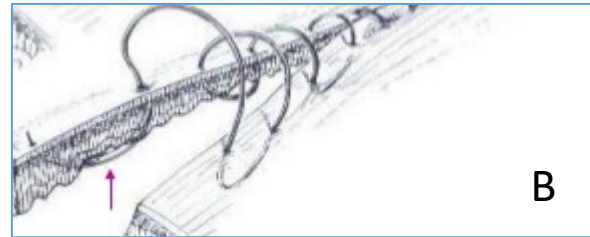
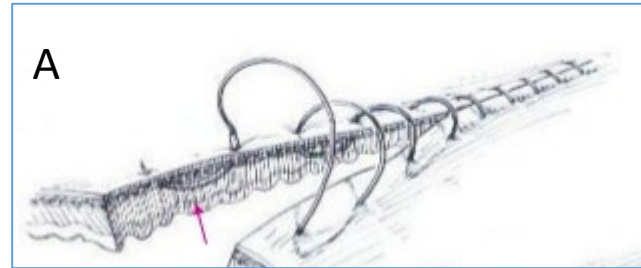
Interpret the blood gas:

Analyte	Value	Reference Range
pH	7.22	7.35–7.45
Paco ₂	65 mm Hg	36–40 mm Hg
Pao ₂	45 mm Hg	90–100 mm Hg
HCO ₃ ⁻	26 mEq/L	20–24 mEq/L
BE _{ecf}	+4 mEq/L	-4 to +4 mEq/L

Blood gas results can be changed from year to year.

Identification of subjects in photos

Which one of the illustrations is an example of a Lembert pattern?



Illustrations include all patterns taught and are from sources not used in class.

Performing calculations

You are presented with a 10 kg dog that is 5% dehydrated. Based on the fluid recommendations given in your notes, which one of the following best describes the expected “per hour” fluid rate for the first 12 hours of treatment?

- A. 42 mls/h
- B. 67 mls/h
- C. 90 mls/h
- D. 133 mls/h

If you are testing their calculating ability, give them the formulas you want them to use, or make sure none of the other answers would be correct if they are “in range”.

- e.g. Maintenance Fluids 60-90 mls/kg/d

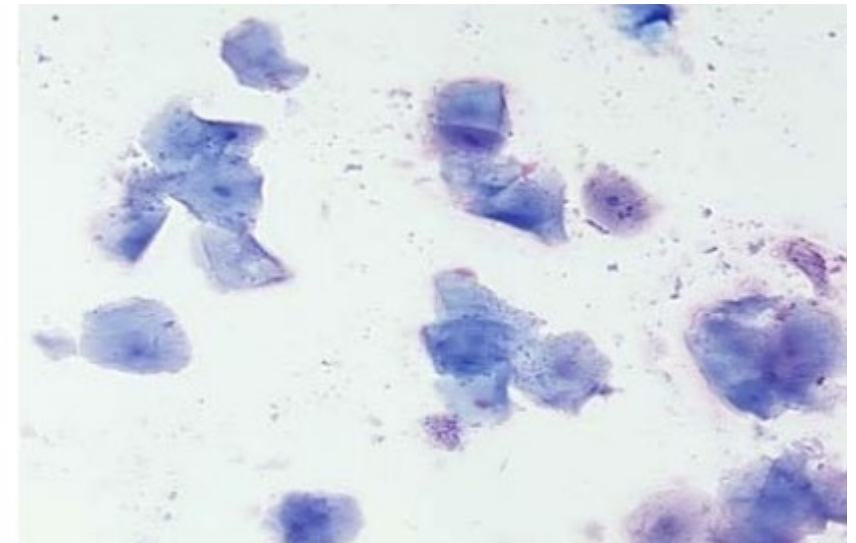
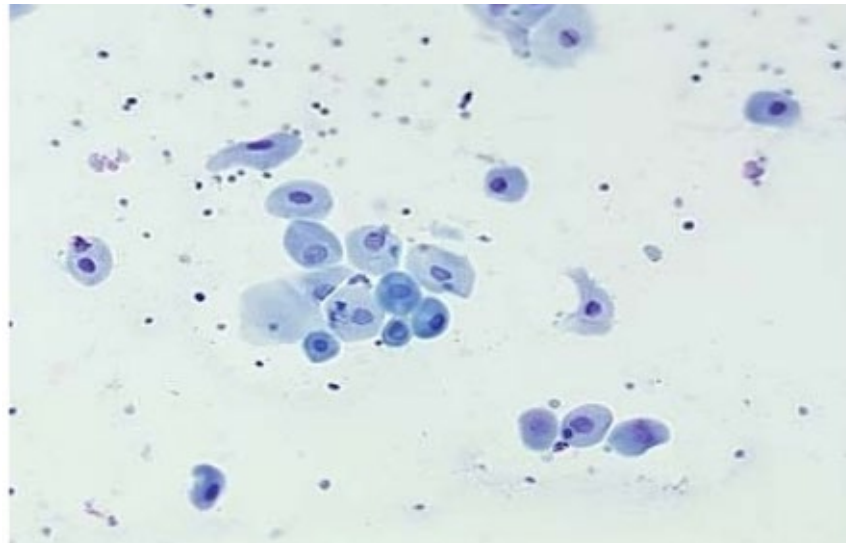
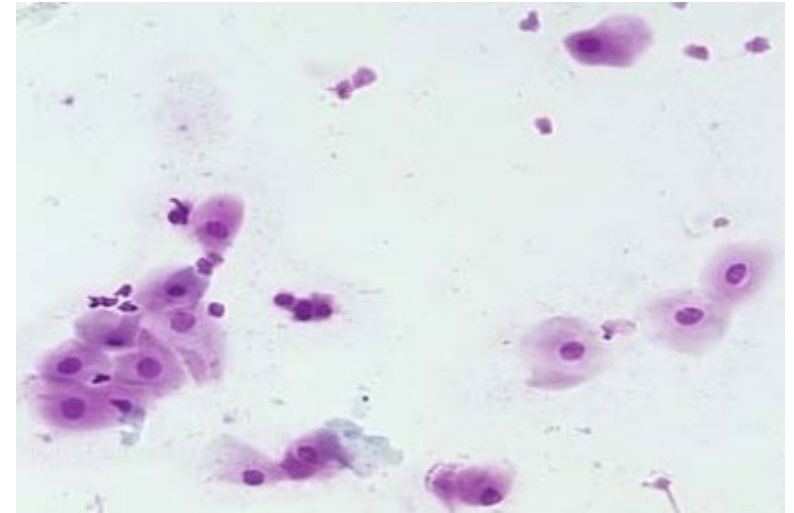
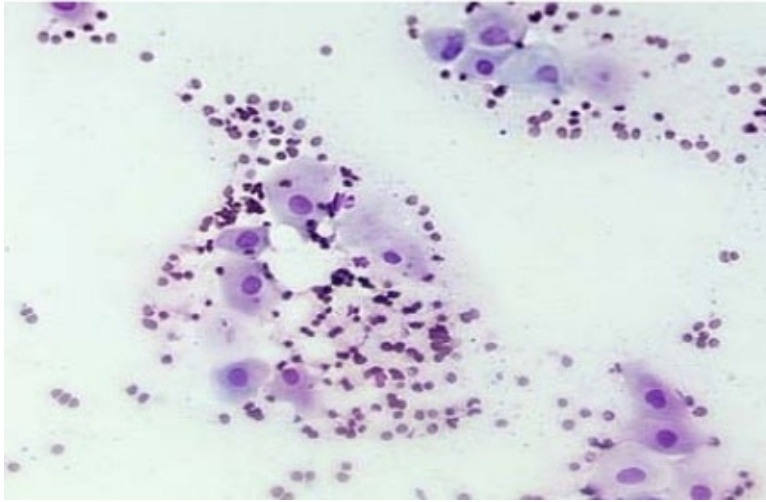
To make a 5% solution of dextrose in a 500 ml bag of 2.5% dextrose fluids, how much 50% dextrose do you need to add to the bag?

- A. 10 mls
- B. 25 mls
- C. 50 mls
- D. 100 mls

Parameters can be changed from year to year or could be worded backwards; e.g., what percent solution results from addition of X to Y?

Interpreting Specimen Photos or Radiographs

Which one of the following images is indicative of proestrus in a dog?



“Thinking Questions” That Take Time to Look Up

During placement of a horizontal mattress suture, bites are taken _____ to the incision, with the needle passing _____ to the surface of the skin.

- A. Parallel, parallel
- B. Parallel, perpendicular
- C. Perpendicular, parallel
- D. Perpendicular, perpendicular

The following steps are part of making the final knot for an intradermal pattern. In which order are the steps performed?

1. Leave a loop
2. Deep to superficial
3. Superficial to deep

- A. 2-1-3-2
- B. 3-1-2-3
- C. 2-3-1-3
- D. 3-2-1-3

“What if” Problem Solving Questions

What would happen if the dial/valve on 17 was turned firmly clockwise?

- A. The structure labelled 16 would become enlarged.
- B. The structure labelled 13 would experience more flow.
- C. The structure labelled 14 would separate from the device.
- D. The gauge labeled 3 would show an increase.
- E. The gauge labelled 4 would show a decrease.

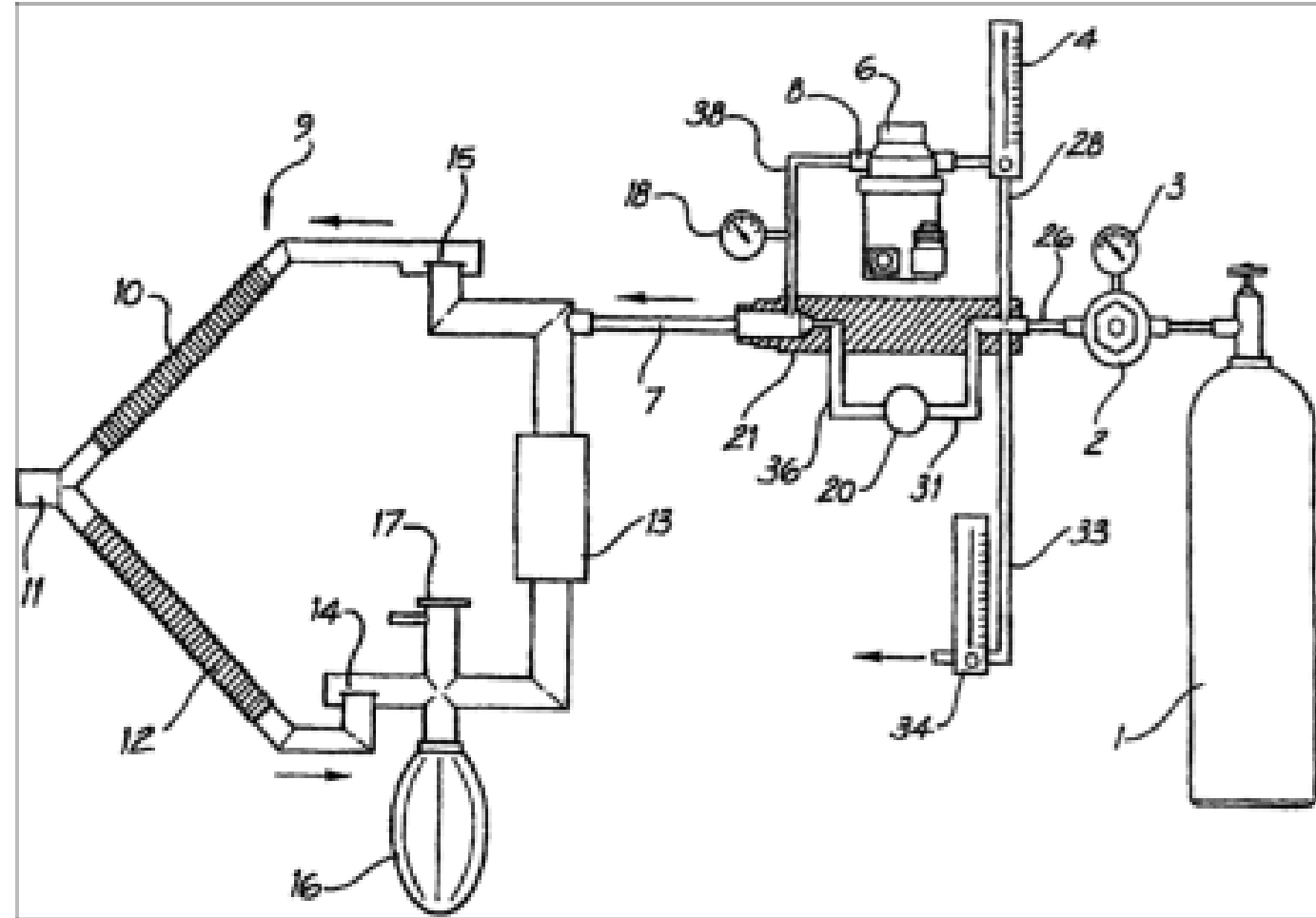
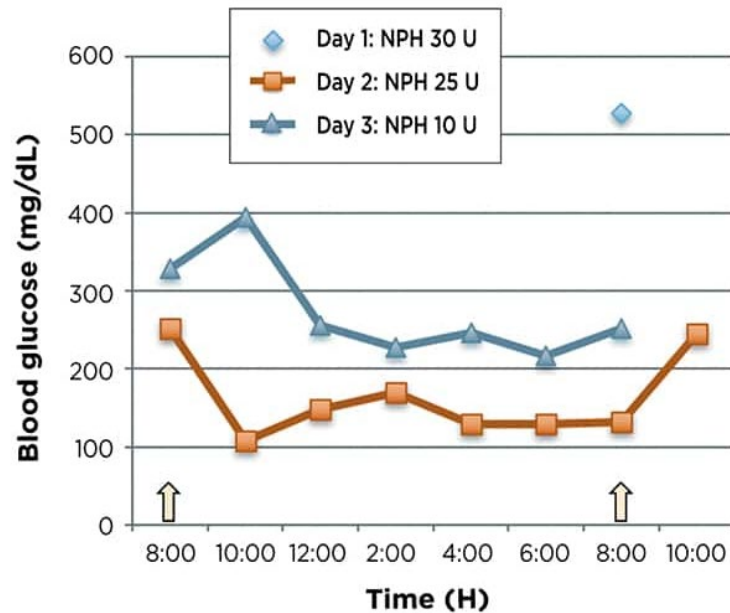


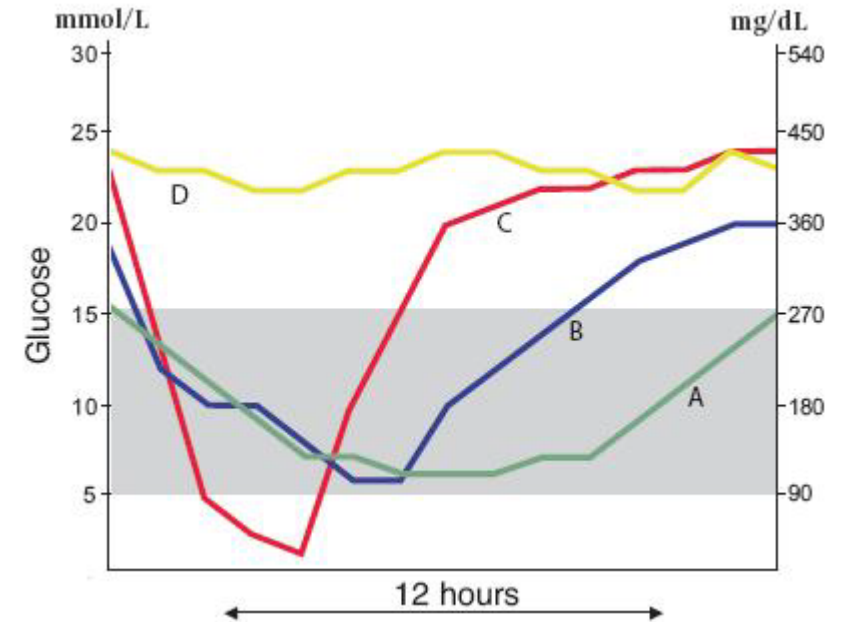
Chart Interpretation

- Have students explain or interpret charts, perhaps throwing in a “what if” question to push their analysis and prediction skills.



Based on the response of this dog to insulin given at 8 p.m. on Day 2, what is the most likely interpretation?

- A. Well controlled diabetic
- B. Somogyi response
- C. Insufficient insulin dose
- D. Insufficient insulin duration



The chart shows responses of diabetic cats given intermediate- acting insulin. The Red Line (C) is an example of:

- a. Duration of insulin effect is too short for the cat.
- b. Poor response because of insulin resistance.
- c. Ideal response of a diabetic cat.
- d. Somogyi phenomenon with counter-regulation

Referring back to notes or Required Reading

Based on a study by Hart et al (*Frontiers in Vet Sci* July 2020), gonadectomy at less than 1 year of age significantly increased the risk of joint disease in

- A. Female Irish wolfhounds
- B. Male Great Danes
- C. Male miniature poodles
- D. Male and female pugs

Higher order thinking questions for MD students

Level III Application

A 65-year old man has difficulty in rising from a seated position and straightening his trunk, but he has no difficulty in flexing his leg.

Which of the following muscles is most likely to have been injured?

- a) Gluteus maximus
- b) Gluteus minimus
- c) Hamstrings
- d) Obturator internus

Level IV Analysis/Evaluation

At the beginning of the shift a doctor receives a report on the following patients. Which patient should he assess first?

- a) An 82-year-old with pneumonia who seems confused at time
- b) An 18-year-old with chest tubes for treatment of a pneumothorax following an accident
- c) A 76-year-old patient with cancer with 300mL remaining of an IV infusion
- d) A 40-year-old who had an emergency appendectomy 8 hours ago

Which of the following action would decrease the radiation dose from the chest CT the least?

- a) Decreasing mA from 250 to 125
- b) Decreasing kVp from 140 to 120
- c) Decreasing the pitch from 2 to 1
- d) Decreasing the scan time from 1 to 0.5

Level V Evaluation

A 78-year-old man presents to the Emergency Department with sudden onset of left-sided chest pain radiating to his back. He has a history of stable angina and peripheral vascular disease. His blood pressure is 80/50 mmHg with a heart rate of 120/minute.

Which one of the following tests would most likely confirm the diagnosis?

- a) Electrocardiography
- b) Chest radiography
- c) Computerized tomography of the chest
- d) Echocardiography

A 76-year-old man is brought to the Emergency Department by relatives who state that he had collapsed suddenly but regained consciousness within minutes. There was no seizure activity. His electrocardiogram showed a sinus rhythm (76/minute), a right bundle branch block, and left anterior fascicular block (left axis deviation). Which one of the following is the most likely cause for this man's loss of consciousness?

- a) Ventricular tachycardia
- b) Type I second degree atrioventricular block (Wenckebach).
- c) Paroxysmal supraventricular tachycardia
- d) Intermittent heart block

Assessment of Higher Ordered Thinking in Medical Education: Multiple Choice Questions and Modified Essay Questions

Arslaan Javaeed, U Ottawa

DOI: <https://doi.org/10.15694/mep.2018.0000128.1>

Published/Date: Med Ed Publish 12/06/2018

Take Home: VMP 835 Principles & Practices of Surgery

- Find an appropriate description of your assigned procedure.
- Identify and record key steps of the procedure.
- Assess your skills level compared to that required for the procedure.
- Perform a literature search for a recent research article.
- Interpret the results of the articles to identify common complications.
- Submit through Canvas.

Total Ear Canal Ablation and Lateral Bulla Osteotomy
Karen Tobias

Operative Report: Procedural Steps

Learning in Lab	Still Need to Learn	No.	Procedural steps
X		1	Make a T-shaped skin incision over the lateral aspect of the vertical canal.
X		2	Incise the skin around the vertical canal opening.
X		3	Dissect and elevate the skin away from the ear canal cartilage.
	X	4	Incise the cartilage around the external auditory meatus.
X		5	Dissect away the muscle and fascial attachments around the vertical canal.
	X	6	Identify the facial nerve.
X		7	Dissect around the horizontal canal to the external acoustic meatus.
	X	8	Transect the cartilaginous horizontal canal attachments to the external acoustic meatus and remove the ear canal.
	X	9	Currette the secretory tissue adherent to the external acoustic meatus rim.
	X	10	Rongeur the lateral wall of the osseous bulla.
	X	11	Currette the bulla to remove the lining.
	X	12	Lavage the surgery site.
	X	13	Obtain a culture from the bulla.
X		14	Place a drain that exits out a separate skin incision.
X		15	Close the subcutaneous tissue with simple interrupted sutures of 3-0 Monocryl.
X		16	Close the skin with simple interrupted sutures of 3-0 nylon.
		17	
		18	
		19	

Reference: Fossum T, Editor: Small Animal Surgery, 5th ed. Elsevier, Philadelphia, 2019; pp 302-330.

Common Complications: Complications are seen in 64.1%-72.5% of ears treated with total ear canal ablation and lateral bulla osteotomy. The three most common complications include facial nerve dysfunction in 33.3-40%; minor incisional complications 23.1-32.5%; and ocular issues, such as keratoconjunctivitis sicca or corneal ulcers, that are unrelated to facial nerve paralysis in 12.8-15%.
Reference: Coleman KA, Smeak DD: Complication rates after bilateral versus unilateral total ear canal ablation with lateral bulla osteotomy for end-stage inflammatory ear disease in dogs: 79 ears. Vet Surg 2016;45:659-663.

40 points of final exam grade

Articles and Databases: CAB abstracts=Web of Science

Web of Science

You searched for: TOPIC: ((dog OR dogs) AND total ear canal AND (resection OR ablation))

Results: 106

Sort by: Date [v]

1. Effects of fentanyl-bupivacaine versus sufentanil-bupivacaine anesthesia on the barbiturate requirements in dogs undergoing total ear canal ablation and lateral bulla osteotomy.

By Wijnberghe, A. S. van, Morrell, V., Clarys, S., et al. Veterinary Anaesthesia and Analgesia Volume: 47 Issue: 3 Pages: 395-400 Published: 2020

2. Complication rates after bilateral versus unilateral total ear canal ablation with lateral bulla osteotomy for end-stage inflammatory ear disease in dogs: 79 ears.

By Coleman, K. A., Smeak, D. D. Veterinary Surgery Volume: 45 Issue: 5 Pages: 659-663 Published: 2016

3. Patulous Eustachian tube and palatine defect in a Dachshund with

Results: 106 (from CAB)

You searched for: TOPIC: ((dog OR dogs) AND total ear canal AND (resection OR ablation))

Baseline knowledge expected....

Note Chat box and Email link: Help is near!

Search terms must be exact, thorough, and carefully written: "AND"; "OR"; "dog OR dogs"

2019

Stop complaining!
You need to keep it on.
It's for your own good.

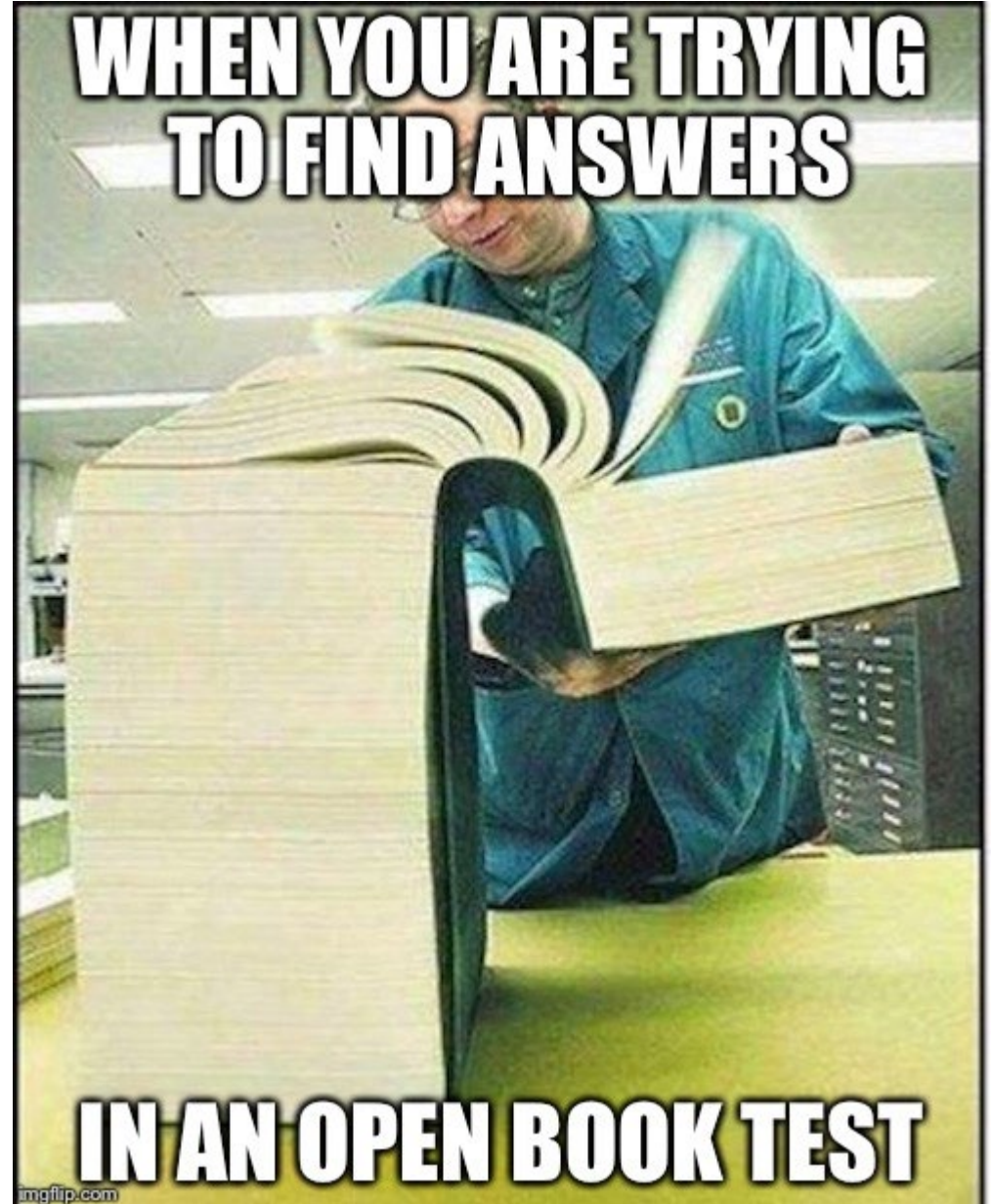


2020



DISCUSSION

**WHEN YOU ARE TRYING
TO FIND ANSWERS**



IN AN OPEN BOOK TEST