



St. Vincent and the Grenadines



TRINITY SCHOOL OF MEDICINE

Issue 1

February 2012



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Farook W. Taha; Adeleke T. Adesina Posted: 02/04/2011

Remember when you were a premedical student in college? It seems like a century ago for many of us who have just completed the first year of medical school. It feels that way because our lives have changed dramatically. Normal life seems to have vanished, and suddenly, 24 hours in a day are not enough to get through the enormous volumes of information that we are expected to learn for every exam. It seems virtually impossible. We barely have time to eat or sleep.

Medical school is not the end of the world. Take it from us, 2

students who have been there, when we say that medical school is what you make of it. Do not let medicine define you; instead, you should tailor medicine to your lifestyle. Otherwise, you might become



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Get to know ... Dr. James Coey

Dr. Coey hails from Ireland but crossed the sea to attend the University of Newcastle-upon-Tyne where he received an Honors degree in Physiology and a Medical Degree from the University of Southampton. Initially set on surgery, he passed the MRCS Part I & II January 2006 and Part III in February 2008. Honors and awards include Distinction in Pediatrics and the Sutton Prize for Surgery. His previous appointments include: clinical placements in General Surgery, Acute Medicine & Paediatric Surgery at the John Radcliffe Hospital, Oxford. Dr Coey has also taught anatomy in the Departments of Anatomy, University of Cambridge and Trinity College, Dublin. He has recently been a Clinical Teaching Fellow at Warwick Medical School, University of Warwick,



working closely with Professor Peter Abrahams FRCS, FRCR, DO (Hon) who is one of the world's most distinguished Clinical Anatomists.

Test Yourself:

Questions from First Aid Q&A USMLE STEP 1

Le, Tao, and Seth Bechis. *First Aid Q&A USMLE Step 1 2011*. 2ndnd ed. New York: McGraw Hill, 2009.



1. Biochemistry

Phosphatidylcholine is a major component of red blood cell membranes, myelin, surfactant, and cholesterol. Phosphatidylcholine is synthesized through phosphorylation of choline obtained from the diet or with reused choline derived from phospholipid turnover. De novo synthesis requires an addition of three methyl groups, transferred from an amino acid. Without the turnover component, defi ciency in which essential amino acid would make dietary choline essential for phosphatidylcholine synthesis?

- (A) Asparagine
- (B) Histidine
- (C) Methionine
- (D) Threonine
- (E) Valine

3. Pathology

2. Cardiovascular

The classic location for an abdominal aortic aneurysm is inferior to the renal arteries and extending to the bifurcation of the common iliac arteries. Repair involves resecting the diseased portion of the aorta and replacing it with a synthetic graft. Based on anatomic considerations, which of the following visceral arteries would likely be resected along with the diseased aortic tissue during the repair of an infrarenal abdominal aortic aneurysm?

- (A) Gastroduodenal artery
- (B) Hepatic artery
- (C) Inferior mesenteric artery
- (D) Left gastric artery
- (E) Splenic artery
- (F) Superior mesenteric artery

A newborn girl is diagnosed as dysmorphic by a pediatrician in the newborn nursery. On physical examination the girl has a broad neck, wide-spaced nipples, and a systolic ejection murmur. An echocardiogram is performed and demonstrates coarctation of the aorta. The echocardiography technologist also runs his transducer across the patient's abdomen and notices a renal abnormality associated with this patient's syndrome. The most likely observed renal abnormality increases this patient's risk for developing which disease?

- (A) Neuroblastoma
- (B) Ovarian cancer
- (C) Transitional cell carcinoma
- (D) Uterine cancer
- (E) Wilms' tumor

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Answers to <u>Test Yourself</u> Questions on previous page

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1. Biochemistry The correct answer is C.

The key to answering this question correctly is an understanding that phosphatidylcholine is formed by donation of methyl groups. Methionine is the only amino acid listed that can donate methyl groups. Its activated form, S-adenosyl-L-methionine, is a very common methyl group donor.

Answer A is incorrect. Asparagine is an essential amino acid with a negative charge. It can serve as a hydrogen ion recipient.

Answer B is incorrect. Histidine is an essential amino acid with a positive charge. It can serve as a hydrogen ion donor.

Answer D is incorrect. Threonine is an essential amino acid with an uncharged polar side chain. It contains a hydroxy group that can serve as a hydrogen ion donor or recipient.

Answer E is incorrect. Valine is an essential amino acid with a hydrocarbon side chain; however, it is not a methyl group donor.

2. Cardiovascular The correct answer is C.

The inferior mesenteric artery originates from the aorta inferior to the renal arteries and superior to the bifurcation of the aorta into the common iliac arteries. This artery may sometimes be sacrificed during an infrarenal aortic aneurysm repair rather than being reattached to a healthy segment of aorta. Usually, there is enough collateral flow to the hindgut from the superior mesenteric artery and the hypogastric arteries that the loss of the inferior mesenteric artery does not result in colonic ischemia.

Answer A is incorrect. The gastroduodenal artery is a branch of the hepatic artery, which is in turn a branch of the celiac trunk.

Answer B is incorrect. The hepatic artery is a branch of the celiac trunk and is found superior to the renal arteries.

Answer D is incorrect. The left gastric artery is a branch of the celiac trunk and is found superior to the renal arteries.

Answer E is incorrect. The splenic artery is a branch of the celiac trunk and is also found superior to the renal arteries.

3. Pathology

The correct answer is **D**. The key to answering this question is realizing that it asks for electrolyte levels in urine, not serum. The ECG shows peak T waves and widened QRS interval, which are classic changes seen in hyperkalemia. Spironolactone is the most likely medication to affect urinary electrolytes. As an inhibitor of aldosterone receptors in the collecting tubule and an inhibitor of Na+ channels, spironolactone greatly decreases the excretion of K+ and mildly increases the excretion of Na+. Urine volume will be high-normal because the diuretic will increase salt water wasting.

Answer A is incorrect. Spironolactone decreases K+ excretion, so there will be decreased levels of K+ in the urine sample.

Answer B is incorrect. Na+ excretion will be increased with the use of spironolactone; also, diuretics will increase the amount of urine volume excreted.

Answer C is incorrect. Spironolactone will increase Na+ excretion and decrease K+ excretion so that K+ concentrations will be decreased in the urine and Na+ concentrations will be increased.

Answer E is incorrect. Spironolactone decreases K+ excretion but increases Na+ excretion; therefore, Na+ concentrations will be elevated in the urine.



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Been

Continued from page 1

overwhelmed by the demands of your new life and lose the sense of why you chose medicine in the first place.



How do you survive medical school? From the beginning, time management must be a major priority. If you can manage your time successfully, you can still enjoy your life to a certain extent. Studying in med school is not the same as it was in college; this is a new world where you have to explore different techniques and find what works best for you. In medical school, it is all about studying smart, not studying hard. If you don't know this at the beginning, you will learn it the hard way.

Studying medicine is a long process and demands a great amount of discipline and sacrifice. But the reward is priceless. We hope that you chose medicine for the amazing field it is: the rich opportunities it provides for helping humans and the avenues it opens for making a difference in the world. The following are some of the most common pieces of advice we have collected:

- 1. <u>Take care of yourself</u>. You may face long-term negative consequences to your health if you adopt negative behaviors. Do not deprive yourself of healthy, fresh food. Do not ruin your health by eating fast food and avoiding exercise. Do not pull all-nighters and deprive your body and brain of sleep; the consequences are too severe for what may be only 15 minutes of productive studying. Your brain needs fresh food, water, fruits, and vegetables. Your body needs exercise and sleep.
- 2. Do not compete with your classmates or compare your grades with others. We all had to be competitive to get into medical school. But once you are accepted, it becomes a level playing field. Although many students still compete with their classmates, it will not make them better physicians. Getting a 95% on your pathology exam does not mean you will be a great pathologist or clinician. As soon as you walk out of your first exam, look around, and

you will see people obsessing about what the right answer was for Question 13. It is easy to spot them. They will come to you and ask you if you put "C" for Question 84. Seriously! Avoid everyone after the exam, and make friends with those who share your philosophy.

3. Answer practice questions while you study. "Studying my notes 10 times is probably the best way to prepare for exams." Wrong! The only way to test your learning is to do practice questions. For example, after studying your Board Review Series physiology textbook, make sure you complete the questions at



the end of each chapter. This will help solidify the concepts you just read. Studying the same thing repeatedly does not make you smarter, but getting a question wrong will teach you quite a bit. Professional educators will tell you that it is statistically proven that students who do more questions perform better on boards, and that the only time you should go back to the big books is when you consistently miss questions on a certain topic and the answer explanations are insufficient.

4. <u>Learn the big picture</u>. You will likely start your first day in school delving into biochemistry, anatomy, physiology, or histology. From the start, instructors talk about columnar cells, impulse transmission, and glycolysis in fine detail. The next day, you are

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learning about brachial plexus and cardiac output. This is an enormous amount of information overload and students are often not prepared. As you memorize, learn the big picture

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- 5. Study with groups. "I am going to study on my own because I don't need anyone's help." Wrong! Medicine is all about teamwork and sharing information. You have to be able to cooperate with others. Even when you apply for residency, it is important to keep this concept in mind. The moment the residency directors feel you will not be a good team player or that you might have "issues" with your colleagues, your application goes in the shredder. Find a small group of people who share the same healthy habits as you, meaning they like to exercise, they do not like to discuss grades, and they have a positive attitude. Once you find the right group, arrange to meet weekly for several hours to ask each other questions about concepts you do not understand. Even better, ask each other questions on little details you think your friends might have understood. Arrange for a review session the night before the exam for last-minute tweaking of your knowledge.
- 6. Take time to engage in stress-relieving activities. Everyone in your class is facing the same amount of stress, some people more than others. You might notice some students walk around with a frown, whereas others wear huge smiles. How is that possible if they are all facing the same pressure? Again, it is time management. If you have extra time, you are able to reduce stress. Spend time with friends, or do something on your own that makes you feel better. Activities like exercise, yoga, listening to calm music, talking to your parents or praying -- there is something out there that makes you feel better. Find it and do it. Do not let the stress affect your studies, relationships and, most importantly, health.

Finally, and we cannot emphasize this enough, remember that we are joining a great profession. Be passionate about what you are learning! Medicine is a treasure and an art. As Henri Amiel said, "To me, the ideal doctor would be a man endowed with profound knowledge of life and of the soul, intuitively divining any suffering or disorder of whatever kind, and restoring peace by his mere presence."

Editor's note: This was adapted from a book manuscript in the publication process, *How to Prepare for the Medical Boards – Secrets for Success on USMLE Step 1 & COMLEX Level 1*, by Adeleke T. Adesina and Farook W. Taha.

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STUDY TECHNIQUES FOR MED SCHOOL





Trinity News

Trinity Newspaper:

~ Want to help with the online newspaper? Contact Madison at <u>miller.madisonr@gmail.com</u>

 \sim If you have a funny picture or interesting article please contact Madison

**Please email Madison if you would like to UNSUBSCRIBE from the newspaper or change your email address.

* The Scalpel will be sent out 3 times a semester.

SMS Update:

~ Valentine's Candy Grams were a success! Thank you to everyone who purchased one to support the organization!

~ Other events to come!

Please email SMS if you have any questions: <u>Team@socmsx.org</u>

AMSA Update:

~ Volleyball tournament: Thank you for coming out and supporting AMSA's Volleyball tournament. AMSA raised a good amount of money to donate to St. Benedict's. Also, thanks to Bianca and Danny for making the delicious food!

~ Other events to come!

Please email AMSA if you have any questions: Drewclare25@gmail.com

Pre-Uni Breakfast:

~ Thank you to everyone that that contributed to making the pre-uni breakfast a success!

Medical Spanish Update:

~ The Medical Spanish club has taken off this semester, meeting at lunch on various Wednesdays.

~ The sessions will go over the same material: anatomy vocabulary, vocabulary of clinical symptoms, and a doctor/patient dialogue

 \sim For more information please contact Armando Medina at

aamedina01@gmail.com

SGA Update:

~ Don't forget to vote for student awards.

~ Polling will be open until 5pm on Friday, 24 February 2012. Any responses received after that time will not be considered. Check you email for the link!

Outreach Committee:

~ A new committee has started!!
~ Has the goal of giving back through service. They hope to create lasting relationships on a person-to-person basis.
~ The meeting is today Thursday Feb. 23 at

5pm

If you have any questions email Armando Medina at <u>aamedina01@gmail.com</u>





Take a second to SMILE! PHARMACY DOCIU 12668 94982 MM Board. MIENT LAUGHTER Exam TABLET AT LEAST HEART BEAT OF MED SCHOOL LIFE THES DAILY AS NEEDED. Quick Cram crazy-Rush-Exam MITED REFILLS/NO EXPIRA "Rush of Sleep - Complex Examination \rightarrow Stress Trepidation (units Pre-test repidation of wave studying of Exam Pick-up feelings) new class Pre-test to Quickly is the BEST Medicipe. Quick Cram Cramming Sleep mildinterval 10 8 12 13 17 2 3 7 11 14 15 16 6 Time (weeks) 232010 ST The Scalpel **Issue 1 - February** med student syndrome I am the almighty! **Trinity** School of Medicine St. Vincent and the Grenadines WHY ARE MY EYES RED ?!? Fear the fuzzay! Written by: microbiology pathology histology **Trinity News Staff** Doctor mode activate! Sarcoidosis Keratitis fugax hereditaria O Conjunctivitis Ollivier syndrome -Staph, strep, pneumonoccus, Polycythemia Fear Itl gonococcus, adenovirus, **Oueensland tick typhus** agle's syndrome Sandfly fever Yellow Fever yeah.. uh... it's just allergies. Take some Claritin and you'll be fine (real doctor edicaljourneyliz.com/2010/03/15/exciting-medical-school-miracles/ & dxblog.blogspot.com/2008/05/comic-med-student-syndrome.html

www.iddxblog.com 2008