UNIVERSITY OF SHARJAH
where civilizations meet
College of Medicine

College of Medicine Newsletter

Volume 2, Issue 5 February 2017

Editor: Hiba Jawdat Barqawi

Inside this issue:

Dean's message of the month

Firstly, I would like to welcome everyone back after the exams. I hope all the hard work paid off and the results reflected all the efforts put into the preparation of these examinations. It's a new semester and I would like to start by welcoming our new faculty members to the college and I wish them a smooth transition. We have been working on changing the curriculum of the foundation year, especially 'Physics' and will update you more on this soon. In other news, the tissue bank is in progress and is expected to be completed by the end of the year. Research Day Symposium is coming up and will take place on 18th March 2017 as well as 'Research Week' which will commence on 16th April 2017. Students from the Armed Forces College of Medicine (AFCM) in Egypt arrived in the UAE and I wish them a pleasant time during their visit and a successful exchange program.

Professor Qutayba Hamid MD, PhD, FRCP, FRS

Dean of the College of Medicine

Speaker	Date
Prof Qutayba	Monday 23/Jan/2017
Dr Maha Saber	Monday 20/Feb/2017
Prof Azzam Magazachi	Monday 20/Mar/2017
Dr Ibrahim Eltayeb	Monday 17/April/2017
Dr Adel AL Elmoselhi	Monday 22/May/2017
Dr Jalal Taneera	Monday 5/June/2017

College News

MOU with German Universities:

The Chancellor, **Prof. Hamid Al Nuaimy** and **Prof. Maamar Bettayeb**, Vice Chancellor for Research and Graduate Studies and **Prof. Qutayba Hamid**, Dean of the College of Medicine, visited three universities in Germany to discuss the potential collaborations between the universities since signing the MOU. The universities were: University of Lubeck, University of Hamburg and the College of Applied Science.

Armed Forces College of Medicine (AFCM) Visit:

Students from the Armed Forces College of Medicine (AFCM) in Cairo in Egypt arrived in the UAE for the exchange program that has been in place between the two colleges since last year.

ExamSoft:

COM has now obtained full access to the IDEAL Consortium Bank.

IDEAL = International Database for Enhanced Assessments and Learning.

In addition, the set up of the ExamSoft classrooms is now complete.

Mock exams will commence soon.

National Ambulance Services Visit:

A delegation from the National Ambulance services headed by Robert Ball (The CEO) with HE Dr Ahmad Daleh Al Hajeri (Deputy CEO) and Mr Fahad Barbara (manger Stakeholder Relation) met with the Dean **Prof. Qutayba** and **Prof. Nabil**, the director of the CTC, to negotiate establishing full time post-graduate diploma in Ambulance Services for local Emarati from the Northern Emirates.

Four major modules were discussed Clinical language training, Emergency Medical Technician Training, clinical placement as well as Emergency Vehicle Driver Training.

The team are currently working on the financial arrangements. Prof. Qutayba obtained the preliminary approval from the Chancellor to go ahead.

4th Batch of Doctors complete Professional Diploma in OB/GYN Ultrasound

Prepared by: **Najna Shabbir**

The Clinical & Surgical Training center at the University of Sharjah was immensely proud to conduct the graduation for the 4th batch of Professional Diploma in OB/GYN Ultrasound on January 12th 2017. The professional diploma training program is intended for obstetrics & gynecology practitioners who desire to build up and improve their knowledge and skills. The program is designed to produces competent, clinically-oriented Ob/Gyn US practitioners skilled in solving problem using Ultrasound. Also motivates the candidate to stay abreast of new developments in the field of prenatal medicine and Ob/Gyn diagnostic and interveinal US imaging, which enhances clinical effectiveness as well as further self-development.

The program consists of 6 modules for a duration of 6 - 9 months. A variety of blended teaching and learning methods were used throughout the program including 2 full days of face to face components for each module as well as hands-on training with real patients. This is complimented by self-directed learning and on-line group teaching including case discussion, image interpretation and journal club sessions.

All 18 candidates were awarded Professional Diploma after successfully completing all requirements and passing the final assessment that includes (Written, Oral, Practical exams and Log book). Given by the Dean of the College of Medicine **Prof. Qutayba Hamid**, and **Prof. Nabil Sulaiman** the director of the Clinical & Surgical Training Center, **Prof. Alaa El Ebrashy** the main scientific faculty and **Dr.Hussein Abo Al Makarem** faculty and examiner, and we were honored for their hard work in the workshops.

Bezmialem Vakif University Visit

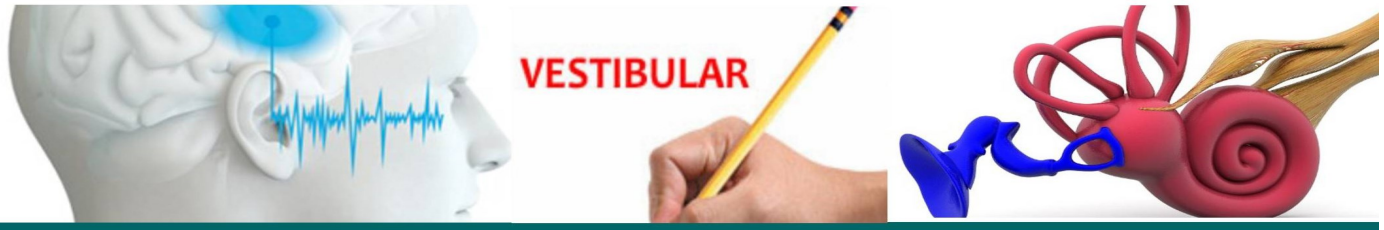
Prepared by: **Jocelyn Pajutagana**

A group of delegates from Bezmialem Vakif University in Turkey came to visit the College of Medicine on the 24th January 2017. Spearheaded by the Vice- Chancellor of the university **Prof. Dr. Rumeyza Kazancioglu** and Secretary General **Dr. Zeynep Gokcen** accompanied by 14 of the top freshmen and sophomore medical students of the university. An array of activities were prepared for the delegates to maximize their visit starting with welcoming the delegates to the University of Sharjah. Headed by the Dean of the College, **Prof. Qutayba Hamid** and some medical faculty and staff. A tour was conducted to allow the delegates get a glimpse of the college facilities and a chance for the Bezmialem medical students to witness firsthand the bustle, vigor and vitality of Sharjah University medical students life in their chosen milieu. Following lunch, there was a visit to the Clinical and Surgical Training Center (CSTC) where a series of First Aid and Cardiopulmonary Resuscitation (CPR) session were provided for them. Finally an exchange of appreciation took place whereby both parties presented their tokens as a means of gratitude for the time well spent. The visit was a huge success; it was an opportunity for both medical universities to lay down their platforms that will inaugurate future collaborations between the universities, with the same goals in producing globally competitive future medical practitioners.

Professional Diploma in Advanced Vestibular Science:

University of Sharjah COM-CTC in collaboration with **Advanced Hearing and Balance Center** –Dubai (AHBC) has commenced its first batch on **Professional Diploma in Advanced Vestibular Science** (PDAVS) in the New Year 2017. The current program is UAE's first in the field of advanced vestibular science. The PDAVS addresses the lack of clinical expertise required for the accurate diagnosis of various vestibular disorders; in turn allow the hearing healthcare professionals for an appropriate selection of treatment methods for the vestibular disordered patients. The duration of the program is 6 months.

The first contact class was inaugurated on the 13th of January 2017 by **Prof. Qutayba** Dean of the College of Medicine and **Dr. Ahmad Alamadi**- CEO of AHBC Dubai. **Drs. Emad Nosair, Adel El-Moselhi and Maha Guimei** from the College of Medicine, are participating in teaching the Anatomy, Physiology and Pathology of the vestibular system in this course.



Professional Diploma in Advanced Vestibular Science

Course Date: 13th January to 24th June 2017

Course Objectives:

The aim of this advanced course is intended to impart the advances in the field of vestibular evaluation, diagnostics and rehabilitation for the practicing audiologist and ENT physicians. The course will also allow the students to acquaint themselves with the latest diagnostics vestibular methods to accurately identify and treat the vestibular disorders.

Course Goals:

The goal of this course is to provide students with an understanding of:

a. How humans maintain balance
b. The contributions of the inner ear to balance
c. Disorders of balance
d. Detailed Assessment of all balance related disorders
e. Approaches in differential diagnosis of balance disorders

What is unique about this Workshop

This course provides face to face using classroom teaching method with Clinical Attachment at the Advanced Hearing and Balance Centre in Dubai.

Target Audience

Audiologists and ENT Physicians

Courses Outline

Module 1: Anatomy, Physiology and pathologies of the Vestibular System

Module 2: Clinical Vestibular evaluation& clinical case studies

Module 3: Pediatric vestibular Assessment and Vestibular rehabilitation therapy

Registration Fee	*Course Duration*
AED 12,000	Duration: 06 months or 24 weeks
Seat Availability	***Next Batch***
8 Maximum	September 2017 - You can now reserve your seat.

Faculty:

Dr. Ahmed Al Amadi, MBBCH,FRCS, Neuro-otology
(Course Director)
Senior Consultant & Neuro-Otologist
CEO- Advanced Hearing and Balance Centre, Dubai

Dr. Muhammed Ayas
Course Coordinator)
Senior Audiologist & Clinical Lecturer
University Hospital Sharjah

Dr. Mohammed Al Hammadi
Senior ENT Consultant, Advanced Hearing and Balance Centre, Dubai

Dr. Ahmed Munzer Alwaa
Senior ENT Consultant & Head of ENT
Clinical Assistant Professor
University Hospital Sharjah

Dr. Adel Elmoselhi
Associate Professor, Basic Medical Science Department, College of Medicine, University of Sharjah

Dr. ElSayed Emad Ahmed Nosair
Assistant Professor of Anatomy
College of Medicine,
University of Sharjah

Dr. Maha Guimer
Associate Professor of Pathology
College of Medicine,
University of Sharjah

Ms. Sandhya Vadekkepattu
Senior Audiologist, Advanced Hearing and Balance Centre, Dubai

Venue: Clinical & Surgical Training Center, M31– Basement, Medical & Health Science College Campus, University of Sharjah

Ms. Lou Ann Tesado, Tel: +971 505 7589/ 7576, Fax: +971 505 7577, Email: ssi@sharjah.ac.ae, www.uoscstc.ae

Clinical Training Center CTC UNIVERSITY OF SHARJAH

جامعة الشارقة UNIVERSITY OF SHARJAH

Advance Hearing & Balance Center
المركز المتطور للسمع والتوازن

Viral News

After all, it turns out that our appendix is not a useless piece

Submitted by: **Prof. Mohamed Al-Hajjaj**

It seems we all might have an apology to make, as new research has confirmed that the appendix isn't the useless waste of space that we all believed it to be. In fact, far from being redundant, it may well have actually been silently helping keep our immune system in check all these years. Can we get a refund on that appendectomy?

The appendix, notorious for its tendency to become inflamed or even rupture, has historically been viewed as a vestigial organ with no real function. But new research supports the idea that the appendix may indeed serve a purpose: to protect beneficial bacteria living in the gut.

The functionality of the appendix has long baffled scientists - Charles Darwin believed it was a throwback to our evolutionary past and was used for digesting leaves, a theory that later came to emerge as the leading hypothesis.

However, a study released this week suggests the appendix may be completely unrelated to digestion and is actually be an important secondary immune organ, a reservoir for good gut bacteria that bolsters our defences. Back in 2007, a group of scientists were the first to suggest the appendix may act as the 'safehouse' for bacteria, and now Dr. Heather Smith from Midwestern University Arizona College has found more evidence to support the claim.

Smith and her team studied 533 mammalian species in the animal kingdom, looking for the presence of the appendix. They found that in those species where the organ had evolved, it almost never disappeared again; a strong case to suggest that it does serve a purpose. When they looked closer they found that those animals with an appendix have higher average concentrations of innate lymphoid cells in their tissue that protect the body from infections. But don't worry if you've already had yours removed, Smith told Time magazine it just means you might take a little longer to get better when you fall ill. "It might take them slightly longer to recover from illness, especially in those in which the beneficial gut bacteria has been flushed out of the body," said Smith.

In a broader sense, Smith says that research on the appendix has provided "another line of evidence against over-sanitizing and excessive hygiene." Because this organ is full of immune tissue, she says, one of the leading causes of appendicitis has to do with poorly developed immunity. "Exposure to pathogens and infectious agents, like bacteria and viruses, is important for the normal development processes of the immune system," Smith says. Without this exposure, development can be suppressed and the immune system can become hypersensitive—a hypothesis often used to explain illnesses like asthma and allergies.

More research in this area may help doctors address the organ's most well known problem. "As treatments are developed for other autoimmune disorders and responses, it's certainly possible that something similar may be developed for treating appendicitis," she says.

Source: Time Health

Schlafen11- A Newly Discovered Antiviral Protein Inhibits HIV-1 in Non-Human Primates

Submitted by: **Shaista Manzoor**

A team of scientists led by the University of Colorado Boulder has discovered that a gene called SLFN11 — which encodes a protein known as Schlafen11, or Schlafen family member 11 — may induce a cellular response against infection by viruses including human immunodeficiency virus-1 (HIV-1).

The human immune system contains various protein-encoding genes that are able to recognize the foreign signatures of RNA viruses and prevent their replication, providing a genetic line of defense against zoonotic (animal-based) diseases.

HIV-1, the virus that causes AIDS, is one of several zoonotic retroviruses that has been able to subvert these defenses and adapt to human hosts via mechanisms that are still being studied. HIV-1 was passed to humans from primates.

In 2012, a University of California San Diego-led team of researchers demonstrated that the SLFN11 gene is capable of limiting HIV-1 replication early in the virus's lifecycle, but the mere presence of SLFN11 in humans has not, to date, provided an effective defense against the disease. The new study found that SLFN11's antiviral potency is highest in non-human primate species such as chimpanzees and orangutans, but less effective in humans and gorillas, indicating that the gene's effects have become highly species-specific over time when it comes to fighting off HIV 1. "The findings suggest that HIV-1 has been able to take advantage of this relaxed selection in humans," explained study lead author Alex Stabell, a researcher in the BioFrontiers Institute at the University of Colorado Boulder. "The immune system contains some of the most rapidly evolving genes in mammalian genomes, and what we are finding is that the immune systems of even very closely-related species, such as humans and chimpanzees, differ in dramatic ways," added senior author Dr. Sara Sawyer, also from the BioFrontiers Institute.

The team analyzed data from primate genome projects to get a broader picture of the SLFN11 gene's evolutionary history and compare its antiviral effects in other primate species. "We examined different versions of this gene in other primate species, looking for positive selection over time," Stabell said. "Genes tend to want to be conserved, to stay the same. But a rapidly adapting retrovirus can force their hand." The analysis found that over millions of years, the antiviral effectiveness of the SLFN11 gene diverged by species to the point where Schlafen11 proteins encoded by chimpanzees, orangutans, gibbons and marmosets now inhibit HIV-1 replication far more effectively than those produced by human, gorillas and bonobos. The researchers also found that SLFN11 can have antiviral effects beyond just HIV-1. Even when HIV-1 is absent from a host's system, the gene broadly restricts protein production based on non-optimized codons, essentially reprogramming cells to create a general antiviral state. The findings could provide new avenues of inquiry for future pharmaceutical and gene therapy research centered on HIV-1.

Source: www.sci-news.com

Antibiotics: 5 Myths Debunked

Submitted by: **Dr. Azma AbdulMalek**

Brad Spellberg, MD |October 20, 2016

Myths Surrounding Antibiotics

After 80 years of experience, much is known about antibacterial agents. Unfortunately, some of what is "known" is incorrect. To paraphrase Osler, half of everything we're taught is wrong—the problem is, which half? Here, we seek to debunk five widely believed myths about antibiotics and resistance.

Myth 1: Humans Invented Antibiotics in the 20th Century

The first clinically useful antibacterial agent that was safe and effective was prontosil rubrum, a sulfa drug synthesized in 1931.[1] However, prontosil was not the first antibacterial agent to be invented, and humans were not the initial inventors. Genetic analysis indicates that bacteria invented antibiotics and an antibiotic-resistance mechanism somewhere between 2 and 2.5 billion years ago.[2-4] Bacteria have been killing each other with these weapons, and using resistance mechanisms to protect themselves against these weapons, for 20 million times longer than we have even known that antibiotics exist. To underscore the point, in 2011, a study[5] was published in which investigators explored a deep cave in the Carlsbad Caverns system in New Mexico, a geological formation that has been isolated from the surface of the planet for 4 million years. The section of the cave that they explored had never before been accessed by humans. The investigators cultured many different types of bacteria from the walls of the caves. Every strain of bacteria was resistant to at least one modern antibiotic; most were multidrug-resistant. Not only was resistance found to naturally occurring antibiotics, it was also found to synthetic drugs that were not created until the 1960s-1980s (including fluoroquinolones, daptomycin, and linezolid).

Implications of busting this myth. After 2 billion years of microbial evolutionary warfare, microbes have already invented antibiotics to poison every possible biochemical pathway, and resistance mechanisms to protect every one of those pathways.[4] Thus, resistance mechanisms to antibiotics that have not yet been invented are already widespread in nature. Resistance is inevitable.

Myth 2: Inappropriate Antibiotic Use Causes the Development of Resistance

This myth is often repeated, with the implication that if we could eliminate inappropriate antibiotic use, resistance would no longer develop. However, all antibiotic use causes selective pressure by killing off bacteria. Appropriate use applies the same selective pressure as does inappropriate use. The difference is that we can and should stop inappropriate use because it offers no benefit. In contrast, appropriate antibiotic use is necessary to reduce mortality and morbidity from bacterial infections.

Implications of busting this myth. We accept that there will always be emergence of resistance from appropriate antibiotic use, but the benefit of appropriate antibiotic use to patients and society outweighs the collective harm. In contrast, without a benefit attached to inappropriate use, there is no "pro" to offset the "con" of selective pressure for antibiotic resistance.
In essence, we must seek to eliminate inappropriate antibiotic use not because this will end emergence of resistance, but because it will slow it down without forgoing any meaningful benefit of antibiotic use.

Myth 3: To Prevent Resistance, Patients Must Complete Every Dose of Antibiotics Prescribed, Even After They Feel Better

The origins of this myth are slightly obscure, but appear to date back to the 1940s.[6,7] Despite how widespread and deeply this belief is held, there are no data to support the idea that continuing antibiotics past resolution of signs and symptoms of infection reduces the emergence of antibiotic resistance.[7] To the contrary, studies have repeatedly found that shorter-course therapies are less likely to select out for antibiotic resistance, which is consistent with fundamental principles of natural selection.[7] Every randomized clinical trial that has ever compared short-course therapy with longer-course therapy, across multiple types of acute bacterial infections (including cellulitis, acute bacterial sinusitis, community-acquired pneumonia, nosocomial pneumonia/ventilator-associated pneumonia, complicated urinary tract infections, and complicated intra-abdominal infections), has found that shorter-course therapies are just as effective.[7] When evaluated, shorter-course therapies have resulted in less emergence of resistance.

Implications of busting this myth. This myth needs to be replaced by a new antibiotic mantra: "Shorter is better!"[7] Patients should be told that if they feel substantially better, with resolution of symptoms of infection, they should call the clinician to determine whether antibiotics can be stopped early. Clinicians should be receptive to this concept, and not fear customizing the duration of therapy.
Continuing antibiotics past resolution of symptoms for acute bacterial infections (not chronic infections, such as osteomyelitis, tuberculosis [TB], or actinomycosis) does not afford patient benefit and probably selects for antibiotic resistance.

Myth 4: When Antibiotic Resistance Emerges, It Is Usually a Consequence of New Mutations at the Site of Infection

This myth possibly stems from the correct recognition that resistance in TB occurs at the site of infection, owing to spontaneous mutations targeting TB therapy.[8] However, TB has unique features distinct from those of most acute bacterial infections. There is no environmental reservoir for TB, and TB is not part of our normal flora. Therefore, TB resistance can only occur at the site of infection in the body. TB cavities also contain very high densities of bacilli (ie, > 10^{12} per gram), which predispose to the emergence of resistance on monotherapy, on the basis of the statistical frequency of spontaneous mutations to such drugs as isoniazid and rifampin. In contrast, when we use typical antibiotics (different from isoniazid, which is specific for TB), they inevitably cause selective pressure among a person's normal bacterial flora. In most cases, resistance emerges not at the site of infection during a course of therapy, but rather among bacteria in the gut or on the skin as a result of genetic sharing of preexisting resistance mechanisms (eg, plasmids, transposons, phages, naked DNA).[8] Enrichment for resistant normal flora can result in future infections caused by the resistant pathogens, and spread of the resistant pathogens through contact with other people or fomites.

Implications of busting this myth. In most cases, we are not aware when resistance emerges in patients. The fact that the patient's infection resolves with prolonged or unnecessarily broad antibiotic therapy does not mean that you have escaped inducing resistance. To the contrary, it is very likely that after exposure to antibiotics, somewhere in the patient's body, strains of normal flora that are resistant to the antibiotics used have been enriched. Those strains can cause future infections, or spread to others in communities or hospitals.

Myth 5: Cidal Antibiotics Result in Superior Clinical Outcomes and Less Risk for Emergence of Resistance Than Do Static Antibiotics

This is another widespread clinical belief that is based on no evidence. First, contrary to common belief, bacteriostatic ("static") antibiotics do kill bacteria; they just require a higher concentration to achieve specific thresholds of bacterial reduction. The formal definition of a bactericidal ("cidal") antibiotic is one for which the minimum bactericidal concentration (MBC) of the drug is fourfold or more above the minimum inhibitory concentration (MIC) of the drug.[9] The MBC is the concentration of the drug that results in a 1000-fold reduction in bacterial density at 24 hours of growth. The MIC is the concentration that inhibits visible growth at 24 hours of growth. These definitions are arbitrary: Why should it be that MBC requires a 1000-fold reduction in bacterial density as opposed to a 100-, 500-, 5000-, or 10,000-fold reduction? Why 24 hours? Why must the MBC not be more than fourfold above the MIC, as opposed to twofold, or 16-fold, or 23-fold? Finally, an antibiotic that achieves a > 1000-fold reduction in bacterial density but does so at a concentration that is eightfold above the MIC of the drug is considered static, even though it clearly kills the bacteria. Given that these terms have been defined by accepted convention and are not based on specific scientific principles, perhaps it is not surprising that there is no clinical evidence of benefit of cidal agents over static agents. A systematic literature review identified 28 randomized controlled trials that compared the efficacy of static vs cidal antibiotics, head to head, for patients with invasive bacterial infection. Almost no trials found a significant difference in efficacy between static vs cidal antibiotics. The exceptions? Three studies found the static agent linezolid to be superior in efficacy to the cidal agent vancomycin for the treatment of complicated skin infections,[32-34] and one trended toward superiority of linezolid (P =.057).[20] A trial found that linezolid was superior in efficacy to vancomycin for the treatment of MRSA pneumonia,[36] and another found linezolid to be superior in efficacy to cephalosporins for pneumococcal pneumonia.[35] In contrast, only one trial found a cidal antibiotic to be superior in efficacy to a static agent. That trial compared tigecycline vs imipenem for the treatment of ventilator-associated pneumonia, and found that tigecycline was inferior.[37] However, pharmacologic analysis determined that the tigecycline dose used in the trial was too low, resulting in inadequate drug levels compared with the susceptibility of bacteria causing the infections[38]; when a subsequent trial was done with double the dose of tigecycline, tigecycline was similar in efficacy to imipenem for the same disease.[31] Thus, there is no evidence that cidal antibiotics are more clinically effective than static antibiotics. To the contrary, more studies have found a static agent to be superior in efficacy to a cidal agent than the reverse!

Implications of busting this myth. Although clinicians continue to prefer cidal antibiotics, there is no evidence that these result in superior clinical outcomes than static agents, nor that cidal drugs more effectively prevent the emergence of resistance. Whether an antibiotic is static or cidal should not be a factor in determining antibiotic therapy for patients.

What Are the Take-Home Messages for Clinicians?

There is no end to our struggle with bacteria; we will never "win a war" against them, and no "gorilla-cillin" will ever come along to save us from emergence of antibiotic resistance. Resistance is inevitable.

Thus, it is critical that we not waste antibiotics. They must not be prescribed to patients who do not have bacterial infections. When appropriate, prescribe the narrowest-spectrum agent and the shortest duration possible to treat bacterial infections.

Do not instruct patients to take every dose prescribed even after they feel better. Rather, focus on evidenced-based, short-course regimens, and if the patient's symptoms resolve before completing the course of therapy, ask that they call you to discuss whether they should stop the antibiotic course early. Encourage them to stop early when their symptoms resolve.

Do not be falsely reassured by the lack of emergence of resistance at the site of infection. When you prescribe an antibiotic, you are selecting for resistance in the patient's microbiome. The resistant bacteria colonize the patient and can cause future antibiotic-resistant infections.

When choosing an antibiotic regimen, cidal vs static is largely irrelevant.

Source: Medscape.com

New guidelines on ear cleaning

Submitted by: **Prof. Mohamed Al-Hajjaj**

Trying to remove your earwax can lead to ear damage, doctors warn. The body produces earwax (or "cerumen") to clean and protect ears. The wax collects dirt, dust and other matter, preventing them from getting farther into the ear, according to an updated clinical practice guideline from the American Academy of Otolaryngology -- Head and Neck Surgery Foundation.

"There is an inclination for people to want to clean their ears because they believe earwax is an indication of uncleanliness. This misinformation leads to unsafe ear health habits," said Dr. Seth Schwartz, chairman of the guideline update group. Everyday activities like moving your jaw and chewing help new earwax push old earwax to the ear opening where it flakes off or is washed off during bathing. This is a normal continual process, but sometimes this self-cleaning process fails. The result: a buildup of wax that can partly or fully block the ear canal.

"Patients often think that they are preventing earwax from building up by cleaning out their ears with cotton swabs, paper clips, ear candles, or any number of unimaginable things that people put in their ears," Schwartz said in an academy news release. "The problem is that this effort to eliminate earwax is only creating further issues because the earwax is just getting pushed down and impacted farther into the ear canal," he explained. "Anything that fits in the ear could cause serious harm to the ear drum and canal with the potential for temporary or even permanent damage," Schwartz warned.

The guidelines, published Jan. 3 in the journal Otolaryngology -- Head and Neck Surgery, state that excessive cleaning may irritate the ear canal, cause infection and even increase the chances of wax buildup, or cerumen impaction.

The new guidelines offer some tips on how to protect your ears:

- Don't overdo it when cleaning your ears. Overcleaning can irritate the ear canal and possibly cause an infection.
- Don't stick things in your ear. Cotton swabs, hair pins and toothpicks can cause a cut in the ear canal, a hole in the eardrum, and/or dislocation of the hearing bones, causing problems including hearing loss, dizziness and ringing.
- Never use "ear candles." The guidelines say there is no evidence that this alternative medicine practice can remove impacted earwax. And so-called candling might cause serious damage to the ear canal and eardrum.
- Do seek medical attention if you have hearing loss, ear fullness, drainage, bleeding or ear pain.
- Do consult your medical provider to find out if you can treat cerumen impaction at home. Certain medical or ear conditions make some treatments unsafe, the authors of the guidelines explained.

Source: MedicineNet.com

Coffee vs. Tea: Is One Better for Your Health?

A hot cup of coffee can perk you up in the morning. A soothing cup of tea can help you relax after a stressful day. And the latest research about the health benefits of each might help you feel a little better about them, whichever beverage you drink. After years of studies that seemed to swing between dire warnings and cheery promises about what our favorite caffeinated beverages do and don't do, much of the recent science regarding coffee and tea is generally positive.

The WHO's International Agency for Research on Cancer recently took coffee off its list of suspected carcinogens, and some research suggests it could help keep colon cancer from coming back after treatment. Other studies suggest drinking coffee might stave off Alzheimer's and Parkinson's diseases. Various studies have pointed to tea drinkers having lower odds of skin, breast, and prostate cancers. Researchers are still trying to pinpoint the exact ways that happens. But tea, particularly green tea, is rich in compounds like antioxidants, which can limit cell damage and boost the immune system; and polyphenols, which have been shown to lower blood pressure and cholesterol. It also may help stave off Alzheimer's disease through a polyphenol known as EGCG, which prevents the formation of plaques that are linked to that brain-damaging illness.

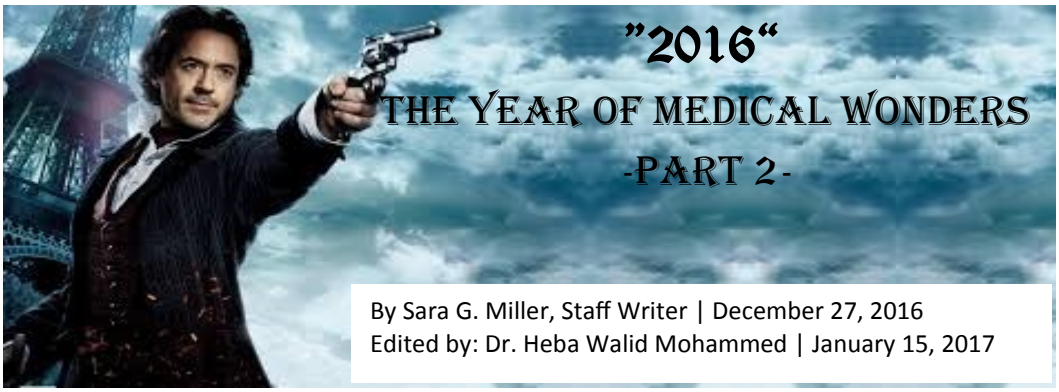
Is one better for you than the other?

Experts say that's hard to say. That's because it's difficult to separate out their different ingredients, their role in your diet, and their effects on different body systems. "I think people are looking at both coffee and tea and how they affect everything, including cancer and GI disease and cardiovascular diseases," says Elliott Miller, MD, a critical care medicine specialist at the National Institutes of Health. Miller and his colleagues recently looked at signs of heart disease in more than 6,800 people from different backgrounds across the country. About 75% drank coffee, while about 40% reported drinking tea. Drinking more than one cup of tea regularly was linked to less buildup of calcium in arteries that supply blood to the heart, a development that can lead to heart disease. Coffee didn't have an effect either way on heart disease, but that was significant in itself, Miller says. "Very often patients will ask their doctors, 'Hey, doc, I've got coronary artery disease, or I've got risk factors like high blood pressure or cholesterol. Is it safe for me to drink coffee?' Because everyone thinks drinking coffee makes your heart excited and is potentially bad," Miller says. "So finding that it's neutral, I think, is pretty important." Researchers say it's hard to pinpoint exactly how both drinks affect health. Both coffee and tea are "complex beverages" that contain a variety of ingredients. They include caffeine, polyphenols, and antioxidants -- compounds researchers are studying for their potential cancer-fighting properties, says Lisa Cimperman, a clinical dietitian at University Hospitals Case Medical Center.

"It's more of a dynamic interaction than one single compound," Cimperman says. Some people have tried to isolate one element in tea or coffee that they think is the secret to one effect or another, "and then they realize that it doesn't have the same effect." Cimperman said drinking tea has been linked to lower risks of cancer and heart disease, improved weight loss, and a stronger immune system. Meanwhile, studies point to coffee as a potential way to head off not just Parkinson's but type 2 diabetes, liver disease, and heart problems, Cimperman says. Another recent study, led by Charles Fuchs, MD, director of the Gastrointestinal Cancer Center at Boston's Dana-Farber Cancer Institute, found regular coffee drinking may help prevent colon cancer from coming back after treatment. In his study of nearly 1,000 patients, Fuchs says, there was a "significant and linear" association between drinking coffee and lower risk of colon cancer returning in those who drank four or more cups a day. "The more coffee they drank, the lower risk of recurrence." But the researchers aren't clear on which element of the drink contributed to that result, and there didn't seem to be any effect from drinking tea, he says. "I think you can have two or more cups a day without any concern, and certainly that may benefit you," Fuchs says. But what about for those who don't drink coffee? "If it was somebody who hates the stuff and asks, 'Should I drink it?' I'd say no. I'd counsel them about diet and exercise and avoiding obesity as measures I think would have a similar benefit."

Other researchers are asking questions about what role genetics and lifestyle play into the effects of drinking coffee or tea. For instance, coffee and cigarettes once went together like ... well, like coffee and cigarettes, which cause cancer and heart disease. Some people's bodies process coffee differently than others, says Martha Gulati, MD, head of cardiology at the University of Arizona College of Medicine in Phoenix. Meanwhile, a preference for tea over coffee might reflect other healthier behaviors, she says. "Does someone who drinks tea do yoga or meditation more?" Gulati says. "I'm not necessarily saying they're associated, but do they exercise more? Are they drinking things like green tea to maintain their weight better than other types of drinks?" And Robert Eckel, MD, an endocrinologist at the University of Denver, says an overall heart-healthy diet is "probably the most important aspect" of preventing heart disease. "We're talking about fruits and vegetables, whole grains, lean poultry, fish, legumes, nuts, and avoiding saturated fat. That nutritional message is unchanging," Eckel says. There are other variables. The WHO's ruling on coffee nonetheless cautioned that any kind of extremely hot drinks could raise the risk of esophageal cancer, while Cimperman says dumping a lot of cream and sugar into your drink can blunt any benefits. "No one beverage or food will make or break your diet," she says. "The quality of your diet is always the sum of all the parts."

Source: WebMD.com



By Sara G. Miller, Staff Writer | December 27, 2016
Edited by: Dr. Heba Walid Mohammed | January 15, 2017

CASE VI:

When a snake bites a Muggle!

A 30-year-old man initially went to the hospital after being bitten by a mugla snake, but he was not given anti-venom because the doctors did not think his symptoms were severe enough to need the medicine. But several days after the man was bitten, he noticed his sense of smell starting to deteriorate, and within weeks, he lost the ability to smell completely.

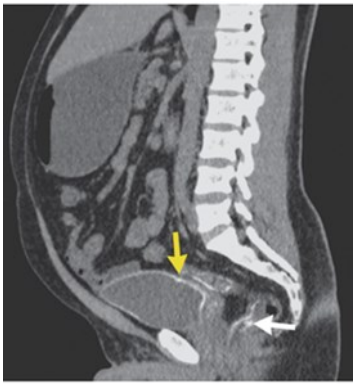
CASE VII:

You're Not You When You're Hungry!

A prisoner in Ireland swallowed a cellphone, and doctors had trouble removing it using their usual approaches. The doctors initially waited 18 hours to see if the cell-phone would move through the man's digestive tract, but it remained lodged in his stomach. The doctors tried to remove the phone by pulling it up through his esophagus, but the mobile phone couldn't be aligned properly to be pulled out of the stomach. Ultimately, the cellphone had to be removed surgically.

CASE VIII:

In an … "Eggshell"!



A parasitic infection caused a Qatari man's bladder to become encased in calci-um. The man, who had been experiencing pain when he urinated and had seen blood in his urine, was infected with the Schistosoma parasite. The parasitic worms were living near the man's bladder and ureters. The eggs of the parasite had entered the man's bladder and had become deposited on the bladder wall. In response, the body caused that part of the bladder wall to become calcified. Indeed, when the doctors did a scan of the man's pelvis, they observed a thin rim of calcification resembling an egg shell forming a border around his bladder. It can take years for the calcification to go away after the infection has been treated.

CASE IX:

Flight of the Crow!

While it's no surprise that cosmetic surgery comes with some side effects, a 40-year-old Brazilian woman wasn't expecting to come out of surgery with temporary kleptomania. Several days after having a tummy tuck and breast augmentation, the woman began to have "an irresistible compulsion toward stealing". The most likely explanation for the woman's symptoms is that at some point during or right after her surgery, she suffered from inadequate blood flow to the brain. This could have led to brain damage, which, in turn, might have led to the woman's symptoms of kleptomania. Eventually, her neurological symptoms went away.

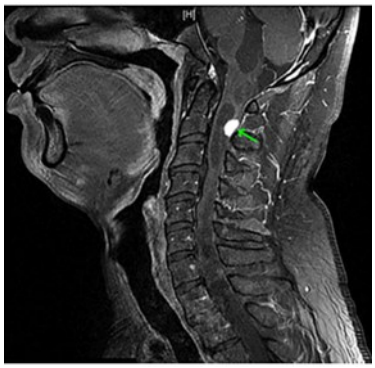
CASE X:

A 20-foot tapeworm finds a home

A 38-year-old Chinese man's gut was home to a tapeworm for more than two years. By the time the man was diagnosed with the parasite, called *Taenia saginata* or beef tapeworm, it had grown to a length of 6 meters. It wasn't until the man started to experience symptoms such as stomach pain, weight loss and vomiting that he finally went to a doctor.

CASE XI:

A mysterious cause of the hiccups



What do you do when your hiccups won't go away? A 35-year-old man went to the hospital three times, looking for a solution! The first two times he went to the hospital, he was given medication to relieve his intractable 2 days hiccups. It wasn't until the third visit that the doctors discovered that the man had a tumor in the back of his neck that was pressing up against his phrenic nerve, thus, sending disturbed signals to the diaphragm, causing it to contract involuntarily, leading to the hiccups.

CASE XII:

AVADA KEDAVRA!

A woman in Italy died shortly after being bitten by a Mediterranean recluse spider, a relative of the notorious brown recluse spider found in the United States. The death was the first reported due to a bite from this type of spider. The spider's venom is toxic to human red blood cells. Without enough red blood cells, the organs in the body don't get enough oxygen. Anti-venom for recluse-spider bites isn't available in Italy (or the US), so the only way doctors could try to save the woman was through supportive care. In other words, the doctors tried to treat her symptoms and keep her alive until the body rid itself of the venom. However, the woman died about 12 hours after being admitted to the hospital.

Visual summary

Managing low back pain and sciatica

A brief overview the new NICE guidelines, from the perspective of a patient presenting in primary care.

Person with low back pain

With or without sciatica

Consider alternatives

Exclude specific causes of low back pain, for example:

Cancer | Infection | Trauma | Inflammatory disease | Cauda equina

Referral

Imaging

Only consider imaging:

In specialist care

and

If likely to alter management

Assess likely recovery outcomes

The complexity and intensity of treatment may vary depending on how likely it is that the patient will have a good functional outcome

Consider using risk stratification –such as the **STarT Back** risk assessment tool

Possible indicators of poor outcomes

Fear / pain avoidance | Low mood | Job dissatisfaction | Ongoing litigation

Good ◀ Likely outcomes ▶ Poor

Provide self management information

Information on nature of pain | Encouragement to continue activities

Self management is important for all patients, even those with acute symptoms and/or sciatica

Managing acute sciatica

Neuropathic pain medication

Epidural injections

Steroid + Local anaesthetic

Spinal decompression

After acute symptoms of sciatica are controlled, it may be appropriate to (re)enter an excercise programme to manage underlying low back pain

To manage a specific episode

Group exercise + Manual therapy + Psychological therapy

Pain is persistent / treatment resistant

Combined physical + psychological programme

Consider pain relief options

Paracetamol ✗ Not effective alone

NSAIDs* ✓ Consider oral NSAIDs

Weak opioids ✓ If NSAID ineffective / not tolerated / contraindicated

✗ **Do not offer acupuncture**

* NSAIDs = non-steroidal anti-inflammatory drugs

thebmj Read the full article online http://bmj.co/lbpNICE

Communication Tips for a Healthy Workplace

Submitted by: **Prof. Mohamed Al-Hajjaj**
Written by: Melissa Stöppler, (U.S. board-certified Anatomic Pathologist with subspecialty training in Experimental & Molecular Pathology).

Misunderstandings and communication problems remain one of the most common sources of workplace strife, and interpersonal difficulties are magnified when conflicting work styles coexist in one setting. Generational differences, personal management styles, educational background, and cultural diversity are all potential sources of office misunderstandings.

While conflict is inevitable, it need not ruin your workday or cause unbearable stress. Try these conflict resolution tips to make your work environment a less stressful, more productive place:

1. Be specific in formulating your complaints. "I'm never invited to meetings" is not as effective as "I believe I would have been able to contribute some ideas at last Thursday's marketing meeting."

2. Resist the temptation to involve yourself in conflicts that do not directly involve you or your responsibilities. Even if someone has clearly been wronged, allow him or her to resolve the situation as he/she chooses.

3. Try to depersonalize conflicts. Instead of a "me versus you" mentality, visualize an "us versus the problem" scenario. This is not only a more professional attitude, but it will also improve productivity and is in the best interests of the company.

4. Be open and listen to another's point of view and reflect back to the person as to what you think you heard. This important clarification skill leads to less misunderstanding, with the other person feeling heard and understood. Before explaining your own position, try to paraphrase and condense what the other is saying into one or two sentences. Start with, "So you're saying that..." and see how much you really understand about your rival's position. You may find that you're on the same wavelength but having problems communicating your ideas.

5. Don't always involve your superiors in conflict resolution. You'll quickly make the impression that you are unable to resolve the smallest difficulties.

6. If an extended discussion is necessary, agree first on a time and place to talk. Confronting a coworker who's with a client or working on a deadline is unfair and unprofessional. Pick a time when you're both free to concentrate on the problem and its resolution. Take it outside and away from the group of inquisitive coworkers if they're not involved in the problem. Don't try to hold negotiations when the office gossip can hear every word.

7. Limit your complaints to those directly involved in the workplace conflict. Character assassination is unwarranted. Remember, you need to preserve a working relationship rather than a personal one, and your opinion of a coworker's character is generally irrelevant. "He missed last week's deadline" is OK; "he's a total idiot" is not.

8. Know when conflict isn't just conflict. If conflict arises due to sexual, racial, or ethnic issues, or if someone behaves inappropriately, that's not conflict, it's harassment. Take action and discuss the problem with your supervisor or human resources department.

9. Consider a mediator if the problem gets out of control, or if the issue is too emotional to resolve in a mutual discussion. At this step, your supervisor should be involved. You can consider using a neutral third party mediator within your own company (human resources if available) or hiring a professional counselor.

Take home point: It's not all about you - You may think it's a personal attack, but maybe your co-worker is just having a bad day. Take time to think BEFORE you speak in response to an insensitive remark. It may be that saying nothing is the best response.

Source: MedicineNet.com

Featured Faculty– Dr. Bashair M. Mussa

Dr. Bashair Mussa graduated with a BSc (First Class Honours) in Medical Sciences (Co-major: Neurophysiology and Pharmacology) from the University of Melbourne (Australia) in 2004. She received the Dean's Award for Academic Excellence in 2004 (University of Melbourne). She obtained her PhD in Neurophysiology and Pharmacology from University of Melbourne in 2011 (Thesis title: Dorsal motor nucleus of the vagus: physiological roles in controlling pancreatic secretory function).

She identified and characterized the pancreatic preganglionic neural pathways that are involved in control of insulin secretion and published her findings in Experimental Physiology, Brain Research, Autonomic Neuroscience, European Journal of Pharmacology, Neuroscience Letters and Journal of Diabetes and Metabolism. Her research interests are focused on the central control of insulin secretion, glucose homeostasis and physiological stress in diabetes.

She held several research positions at the College of Medicine and Howard Florey Institute (University of Melbourne). In 2013, she joined Rashid Centre for Diabetes and Research (Sheikh Khalifa Hospital, Ajman-UAE) where she was involved in the development of the Clinical Research Unit and coordination of several clinical trials including Lira-Ramadan. She received an award for her presentation (Personalized interventions in type 2 diabetes: moving beyond healthy diet and enhanced physical activity) in the 6th Emirates Diabetes & Endocrine Congress (2016, Dubai-UAE).

Currently, she is an Assistant Professor of Physiology at the Basic Medical Science Department (College of Medicine- University of Sharjah) and the Neuroscience Unit Coordinator for Year 3 medical students. She teaches general physiology and neurophysiology for Year 1, 2 and 3 medical students. She is a member of the Diabetes and Heart Diseases Research Group and the Tissue Injury and Repair Research Group at Sharjah Institute for Medical Research (University of Sharjah). She is supervising several students' projects including CBR, Clinical and Basic research projects and two of her research projects "Diabetes-induced depression: BDNF as a promising therapeutic target" and "Fos expression in hypothalamic cells: an investigation of molecular basis of hypoglycemia unawareness" were funded by Boehringer Ingelheim and LABCO research grants, respectively.

Dr Bashair's Current research projects:

- Personalized interventions to manage physiological stress and improve sleep patterns in type 2 diabetes Emirati patients: a randomized controlled clinical trial.
- The role of nitrergic pathways in modulating the glucagon secretory response to hypoglycemia.

Featured Faculty– Recruitment

We welcome the following new faculty to our college:

Dr. Rifat Hamoudi is an Associate Professor in Molecular and Computational Pathology. He was working at the Division of Surgery and Interventional Science at University College London (UCL) in the UK prior to joining us.

Dr. Hamoudi completed his undergraduate degree in Computing in London, where his thesis focused on the development of Medical Expert System for diagnosing diseases. He then went onto the field of Molecular and Pathology where he combined his computing engineering background to the field of medical sciences and bioinformatics and is now heavily involved in research and teaching of computational and molecular pathology.

Dr. Hamoudi is a PI on breast cancer molecular mechanisms and has Wellcome Trust research excellence grants as well as being co-investigator on research grants totalling £1 million to date. He has 9 years postdoctoral research fellow experience and to date has 10051 citations with H-index of 40. He has been published in high impact journals including Cell, Science, Nature and Nature Genetics and co-authored more than 95 scientific and informatics publications.

We met Dr. Hamoudi when he gave a seminar at SIMR on December 23rd 2015. We look forward to welcoming him to the College of Medicine .

Dr. Sanjay Kumar Sood is a Professor in Physiology with a total of 25 years of teaching and research experience in Physiology.

Dr. Sood completed his MBBS in Indira Gandhi Medical College in India. He then went on to complete his PhD in Physiology.

Dr. Sood was Chairperson of the Physiology Department at RAK Medical and Health Sciences University (RAKMHSU). He was also Chairperson of the Research and Ethics Committee at RAKMHSU.

He is also a 'Visiting Scholar' at the Sheikh Saud Bin Saqr Al Qasimi Foundation for Policy Research as well as being a member of the Research and Ethics Committee at the Ministry of Health in Ras Al Khaimah.

He has organized many workshops, given many talks and seminars, supervised both undergraduate and postgraduate student projects and has many publications.

We look forward to welcoming Dr. Sanjay to the College of Medicine.

Faculty & Staff Achievements, Awards and Special Recognition

Publications:

Dr. Emad Nosair recently had an article published: Emad Nosair, Hossam Hamdy. **Total Student Workload: Implications of the European Credit Transfer and Accumulation System for an Integrated, Problem-Based Medical Curriculum**. *Health Professions Education*, accepted on line Jan 28, 2017 [DOI: http://dx.doi.org/10.1016/j.hpe.2017.01.002]

Conferences, Seminars and Talks:

Dr. Mohamed El Hassan El Sayed gave a lecture on 'Constructing A-Type Multiple Choice Questions (MCQs): Step by Step' on the 24th January 2017 at the Continuous Development Workshop at Fatima College of Health Sciences (Abu Dhabi Campus).

كلية فاطمة للعلوم الصحية
FATIMA COLLEGE OF HEALTH SCIENCES

CERTIFICATE OF APPRECIATION

is hereby presented to

Dr. Mohamed El Hassan El Sayed

In recognition for the invaluable contribution as Presenter of
the "***Constructing A-Type Multiple Choice Questions (MCQs): Step By Step***" Lecture

Given on 24th January 2017
At the Continuous Professional Development Workshop
held at Fatima College of Health Sciences, Abu Dhabi Campus, United Arab Emirates

Dr. Daryl A. Cornish
Director

Dr. Emad Nosair, Dr. Adel El-Moselhi and **Dr. Maha Guimei** from the College of Medicine, are participating in teaching the Anatomy, Physiology and Pathology of the vestibular system in the Professional Diploma in Advanced Vestibular Science (PDAVS) being held at the University of Sharjah College of Medicine-Clinical and Surgical Training Center (CTC) in collaboration with Advanced Hearing and Balance Center –Dubai (AHBC) .

You Know You're a Medical Student When . . .

The Tell-Tale Signs That Let You Know Whether You're Settling Into Student Life

Submitted by: **Dr. Azma Abdul Malek.**
Written by: Aemun Reza Stud BMJ. 2016;23(i3696)

Instead of "People Watching," You Play "People Diagnosing"
Non-medics sit in a coffee shop and watch the world go by, but you are unable to resist silently diagnosing strangers in your head. If you see someone with a limp, you will immediately think it is a Trendelenburg's gait, or assume that a person with a rash must have psoriasis.

You Read a List of Vague Symptoms and Become Convinced You Have That Disease
This is also known as "medical student syndrome." Whether you diagnose yourself once a week or once a year, every medical student will, at some point, read about a condition and start panicking that they have the same disease.

Non-medics Come to You for Medical Advice Before You've Graduated
You are seen—rightly or wrongly—as the fount of all medical knowledge by members of your social circle. Your advice always includes drinking plenty of fluids, resting, and getting a second opinion from a general practitioner.

You Can Talk Casually About Bowel Surgery While Eating Your Lunch
You are happy to describe how you held the retractor as a surgeon washed out an abdomen after a perforated bowel, while eating your lasagna. In the company of non-medics you might want to refrain from such graphic imagery.

You Think About Lunch While Standing Over a Cadaver
You can't stop your mind drifting during anatomy sessions. Those chemicals that help to preserve human bodies always make you start thinking about what you're having for lunch, or maybe even make you start comparing organs to different fruits—did you know the weight of a human lung is remarkably similar to that of a small melon?

You've Invented a Teaching Session to Get Out of a Ward Round or Clinic
On a ward round you are too afraid to ask whether you're allowed to go to lunch, but after six hours of being on your feet you invent a teaching session in a vague location on the other side of the hospital to escape.

More Nurses Than You Will Admit to Have Told You Off for Loitering on the Wards
A lot of your time on hospital placements is self directed, and sometimes you're just hanging around in corridors or at the nurses' station with your Oxford handbook of clinical medicine in hand. It takes up a lot of energy to look busy.

You Can Spot Every Mistake in Medical Television Shows
Whether it's Grey's Anatomy, Scrubs, or House, the shows that you loved before medical school will never be the same. You'll develop the need to point out every medical inaccuracy and non-medics will no longer be willing to watch these shows with you because you're ruining it for them.

You've Been Interrogated or Ignored by More Consultants Than You Care to Remember
Consultants are without doubt the scariest people alive. You spend your time trying to get their attention, only for them to ignore you. However, you end up on the verge of a mental breakdown once they do realize you exist and decide to quiz you on the spot about diseases you've never even heard of.

You're a Few Words Away From Being Fluent in Latin
After staring at your anatomy textbook, you've wondered whether studying Latin at A level would have been more useful than studying biology. You know more Latin words than you probably should, and you are worried that they are taking up valuable brain space.

You've Watched Students Who Joined University After You Graduate Before You
Year after year you watch other students graduate, get married, and have children before you. While they're getting on with life, you're still sitting at your favorite desk in the library learning the names of the bones in the foot. You've also had a mini panic attack about how you may die alone.

You Go Willingly on a Night Shift for Free
Only students—both medical and nursing alike—know the pain of following doctors around all night, ruining their sleep patterns in the name of education. This is a commitment and we all have to do it at some point.

You're Astounded by How Little Non-medics Know About Medicine
Whether you're talking to a patient while taking a history, or talking to your non-medic family, you will be amazed by how little the general public knows about medicine: "You think I can see the heart by looking in your mouth?" You should also be careful about your audience for medical jokes—some people will just not get them.

You've Learnt So Many Mnemonics That You've Forgotten What They Stand For
Some Lovers Try Positions That They Can't Handle is the mnemonic for the carpal bones in the hand, but can you remember what each word stands for?

You Use This Introductory Spiel Every Time You Take a History
"Hi, my name is [insert name here] and I'm a first/second/third/fourth/fifth year medical student. I've been asked to come and speak to you about why you have come in today; would that be okay? Can I start off by confirming your name and date of birth..."

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College of Medicine

University of Sharjah

For any comments regarding this newsletter or suggestions for improvement please contact the Editor

Hiba Jawdat Barqawi
on hbarqawi@sharjah.ac.ae
Ext: 7268

Doctor's Orders

This Issue's "Doctor's orders" is submitted by **Prof. Mohamed Al-Hajjaj**

Travelers' diarrhea (TD)

Travelers' diarrhea (TD) is the most predictable travel-related illness. Attack rates range from 30% to 70% of travelers, depending on the destination and season of travel. Traditionally, it was thought that TD could be prevented by following simple recommendations such as "boil it, cook it, peel it, or forget it," but studies have found that people who follow these rules may still become ill. Poor hygiene practice in local restaurants is likely the largest contributor to the risk for TD.

TD is a clinical syndrome that can result from a variety of intestinal pathogens. Bacterial pathogens are the predominant risk, thought to account for 80%–90% of TD. Intestinal viruses usually account for 5%–8% of illnesses, although increasing use of improved diagnostics may increase recognition of norovirus infections in the future. Infections with protozoal pathogens are slower to manifest symptoms and collectively account for approximately 10% of diagnoses in longer-term travelers. What is commonly known as "food poisoning" involves the ingestion of preformed toxins in food. In this syndrome, vomiting and diarrhea may both be present, but symptoms usually resolve spontaneously within 12 hours.

The most important determinant of risk is travel destination, and there are regional differences in both the risk for and etiology of diarrhea. The world is generally divided into 3 grades of risk: low, intermediate, and high.

- Low-risk countries include the United States, Canada, Australia, New Zealand, Japan, and countries in Northern and Western Europe.
- Intermediate-risk countries include those in Eastern Europe, South Africa, and some of the Caribbean islands.
- High-risk areas include most of Asia, the Middle East, Africa, Mexico, and Central and South America.

Bacterial and viral TD presents with the sudden onset of bothersome symptoms that can range from mild cramps and urgent loose stools to severe abdominal pain, fever, vomiting, and bloody diarrhea, although with norovirus vomiting may be more prominent. Protozoal diarrhea, such as that caused by *Giardia intestinalis* or *E. histolytica*, generally has a more gradual onset of low-grade symptoms, with 2–5 loose stools per day. The incubation period of the pathogens can be a clue to the etiology of TD:

Bacterial and viral pathogens have an incubation period of 6–72 hours. Protozoal pathogens generally have an incubation period of 1–2 weeks and rarely present in the first few weeks of travel. An exception can be *Cyclospora cayetanensis*, which can present quickly in areas of high risk.

Untreated bacterial diarrhea lasts 3–7 days. Viral diarrhea generally lasts 2–3 days. Protozoal diarrhea can persist for weeks to months without treatment.

How to avoid Traveler's Diarrhea?

Travelers' diarrhea is rarely serious and almost always goes away on its own. Still, you can take steps to prevent it. The CDC recommends avoiding:

- Tap water
- Food sold by street vendors
- Raw or undercooked meat and seafood
- Unpeeled fruits and vegetables