

RABI-UL-AWWAL 1442 | NOVEMBER 2020

WHITE COATS



INSIDE

ORAL HYGIENE
IN PREGNANCY

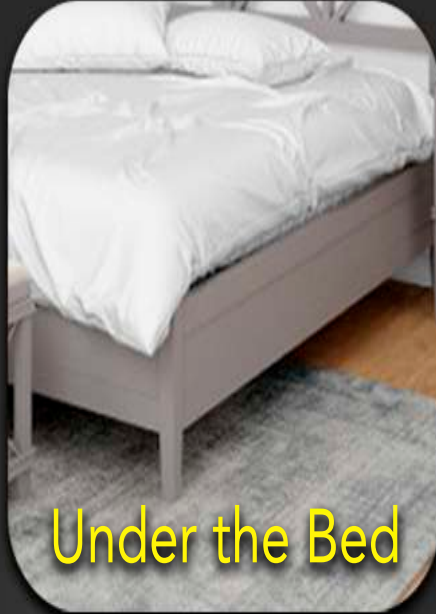
UNDERSTANDING
YOUR THYROID

MENTAL HEALTH
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FLYING DURING
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Wall Corners



Under the Bed



Behind the
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The common places that
mosquitos hide at in every
home



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EDITORIAL MESSAGE

For most of us, when we talk about healthcare we tend to focus on Doctors and sometimes nurses. We also tend to believe a doctor is a doctor, all of them are the same! However it is important for us to realise that the medical field is a huge family, where we have several professionals who are equally important as general doctors when it comes to healthcare.

This year's White Coats under the theme "Medical Specialities" will highlight some specialties and professions within the medical field and their role alongside the common issues they deal with.

We have handpicked articles with the hope of aiding you with the perspective of the different professions, and common diseases to work towards adapting a healthier lifestyle and overcoming the challenges/diseases that we are most likely to encounter in our lives.

Kudos to the amazing team and the writers who worked tirelessly. We would not have reached here without you all, we appreciate your efforts! A special thanks to our designer Dr Sibtain Moledina for his wonderful and creative work. We would also like to appreciate our main sponsor Masumin printways and stationers along with all our sponsors, this would simply not be possible without you. Asanteni Sana! May Almighty bless them all abundantly.

We understand that it has been a difficult year for all of us with the Coronavirus pandemic. Let us continue to practice precautions. To avoid panic and misinformation, let us take information from the official bodies as well as medical professionals only. Lastly let us remember all individuals who have been affected by the virus and all our marhumeen with a Surah Fatiha.

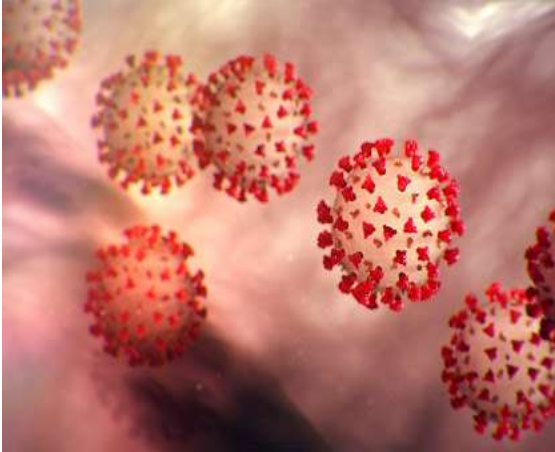
We really hope you enjoy reading this as much as we did when compiling it! Should you have any queries or suggestions, we welcome them happily and await your feedback via email at mhi.whitecoats@gmail.com.

*Abbasaley Abbas and Farha Rashid
Chief Editors of White Coats 2020*



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Central Medical Board of KSIJ-Dar**

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MAHDI HEALTH INITIATIVE

By Syed Orujul Hassan and Fatemazehra Rajpar

Mahdi Health Initiative is a group of young health professionals from the community with the main objective of promoting a healthy community. MHI targets in building a platform for continuous professional development and building a network of health professionals from different specialties.

In the year 2016, MHI was formed as a branch of Central Medical Board under the roof of Khoja Shia Ithna-asheri Dar es Salaam Jamaat and consisting of the community health professionals with the sole objective to serve the needs of our growing community. Here we are 4 years later with over 250 members from all the Medical and Allied Health fields from various parts of the world. MHI has a core team to organize and give direction to its objectives and to ensure all activities take place smoothly.

To date, MHI has organized several events and programs such as screening campaigns, health talks and seminars. We've also collaborated with various organizations for health screening camps as well as providing education. Mahdi Health Initiative also uses various platforms of social media to disseminate health information on common medical conditions to the public, as we hope to create awareness and promote a healthier lifestyle amongst people.

Over the year of 2020, MHI has conducted various online programs due to the COVID-19 pandemic. They included:

Health Seminars: Online sessions over Zoom platform were conducted that included topics on tackling COVID-19, ARDS management in COVID patients, Making Sense of Data: COVID-19 & Misinformation, the public health aspects of COVID-19 and transitioning & coping with schools as they re-open. We had local

and overseas speakers and we are grateful to them for facilitating these sessions successfully.

SHIA - Which stands for Source Health Information Access. This is one of our most successful health information dissemination campaigns for the community. The topics we covered this year were on Glaucoma, Osteoporosis, Hearing Loss, COVID-19 and Mental Health Awareness.

We also conducted an **Audiology screening** in collaboration with HearWell Audiology clinic, a **Sickle Cell screening** event in collaboration with the Sickle Cell Programme - Muhimbili University of Health and Allied Sciences and Central Medical Board, in March and participated in a Blood Donation Drive in collaboration with Damu Salama and the KSIJ - DSM, in August.

For the upcoming years MHI plans to have even more health camps and screenings, and plans to provide continuous medical education to its members and promote medical research within the community.

We thank the Almighty for giving us the opportunity to serve the community and we hope our efforts translate into the nurturing of healthier lifestyles within the community.

Thank you.



RADIOLOGY'S ROLE BEHIND THE SCENES

By Dr. Aamir Kanji

At 5AM in the morning just as he woke up to go the washroom and collapsed, this 62 year old man wasn't able to see with his left eye, speak properly, move his left arm or leg the way he normally used to. He complained of a headache during this time. He was known to have hypertension (high blood pressure) and diabetes for about 20 years. He was prescribed medication for his illnesses but was not adherent to it.

After being admitted at the hospital early that morning he was reviewed by the doctors on duty and was thought to have suffered a stroke. Ideally, a stroke could have occurred in this patient due to the fact that he had not kept his diabetes and hypertension under decent control.

Now that the doctors are certain that this is a stroke after the initial assessment, it's time to classify the type of stroke. Generally, a stroke can take two forms i.e. ischemic stroke (less serious one) or a hemorrhagic stroke (bleeding in the brain). The latter one is more of an emergency and usually surgical intervention is required. However, do we know which one are we dealing with? How can we know for sure? The answer is quite simple. This patient requires an urgent CT scan!

We have heard the terms CT scan, MRI, X-ray all too commonly in our daily lives. At least each of us knows or will know a person who will require some form of medical imaging technology in their lives to diagnose a particular disease or illness. In addition, these investigations are usually expensive especially when you talk about CT or MRI.

Our patient as above requires a CT scan of the brain

to first confirm that the patient has suffered a stroke. Secondly, the imaging will also be able to show features which can suggest that this is an ischemic or hemorrhagic stroke (more dangerous one). Once the type of stroke has been recognized it will help your primary doctor to assign the appropriate treatment for the patient whether conservative or surgical.

A radiologist is a medical doctor who has specialized in treating medical diseases and injuries using medical imaging. A few examples of imaging include X-rays, ultrasounds, CT-scans, MRI, PET scans and other imaging modalities. A radiologist isn't a doctor who you will usually see in the wards or clinics. You will usually find them inside their offices behind a computer screen that is connected to the imaging modality used for a patient's diagnosis. Despite their minimum social interaction, a radiologist can have a massive role to play in the outcome of a patient's prognosis. This is evidenced by the example above.

A radiologist's job description can be quite demanding, from late night calls to performing interventions such as endovascular thrombectomies. This is a procedure performed by an interventional radiologist. This type of radiologist has gone one step further in radiology training. The fascinating thing about being a radiologist is that many times you don't have to be around physically to make a diagnosis. The imaging technician can just upload the films online and the radiologist can have a look from wherever he is in the world to figure out what's wrong. This is the beauty of the field of radiology. Indeed, it has inspired a medical doctor such as myself to seriously consider as a field of specialty in the future.



NANOTECHNOLOGY IN CANCER THERAPY

By Ummuabiha Karim

I don't think there is a single soul that hasn't heard the word "Cancer", and I think that itself is enough to explain the space it takes up in the mind of medical professionals and scientists. Everyone reading this has either suffered from cancer, watched a loved one suffer from it or knows somebody who has suffered from it.

But what exactly is cancer?

Our bodies are made up of a million tiny cells. These cells form our organs - like our kidneys, lungs, heart, liver and many more. These cells need to grow, however when the growth of these cells goes out of control and become abnormal, they form lumps called tumors. Sometimes these tumors do not pose a threat, but sometimes these tumours could be malignant. Malignant tumors mean cancer.

There are more than a 100 types of cancer that could affect a human being, they occur in different areas of the body; breast cancer, lung cancer, colon cancer, skin cancer, to mention a few.

Treatments like radiation therapy, chemotherapy and surgery help to improve the patients' state, and to slow down the cancer cells, but researchers still scratch their heads on better methods. Why? Because methods like radiation and chemotherapy also kills NORMAL cells which causes horrific side effects, and anyone who has seen or experienced cancer can vouch for this.

Everyday there are some cells in our body that want to become cancer cells, however the "watchman" of our body (our immune system) destroys these cells.

Nanotechnology

Although this word may seem very far from cancer, in reality, it is very useful to treat and diagnose cancer. It is a fast growing field in science and biotechnology.

Remember how our body has a million tiny cells and how some of them grow abnormally to cause cancer? Well, imagine if there was something SMALLER than those cells, that can actually enter them and do some really cool stuff! That is exactly what nanotechnology is all about.

By definition, Nanotechnology is the field concerned with manipulating materials and devices on a scale of atoms and molecules.

A nanometer is one billionth of a meter (10⁻⁹m). To put it into perspective, the width of one of your hair strand is approximately 100,000 nanometers an ant is 5 million nanometers long.

Why is small good? It's efficient, cheap, lighter and obviously can get into smaller spaces.

Nanotechnology meets Cancer:

As if cancer itself was not enough of a problem, an even bigger challenge is early detection of cancer. So this is where nanomaterials may be used. Imagine nanoparticles as very very tiny bulbs that will light up if you turn on the switch. These bulbs are injected inside our bodies.

The cancer cells are the sockets - so the bulbs (nanoparticles) connect to the cancer cells, then scientists and medical professionals turn on the switch from outside our body by various forms of energy such as radiation. These tiny bulbs light up, and voila! The ones outside can now tell you if you have cancer or not by seeing if the bulb switched on. Remember, without a socket, the light can't turn on and so if there was no cancer, they wouldn't detect these nanoparticles in their machines!

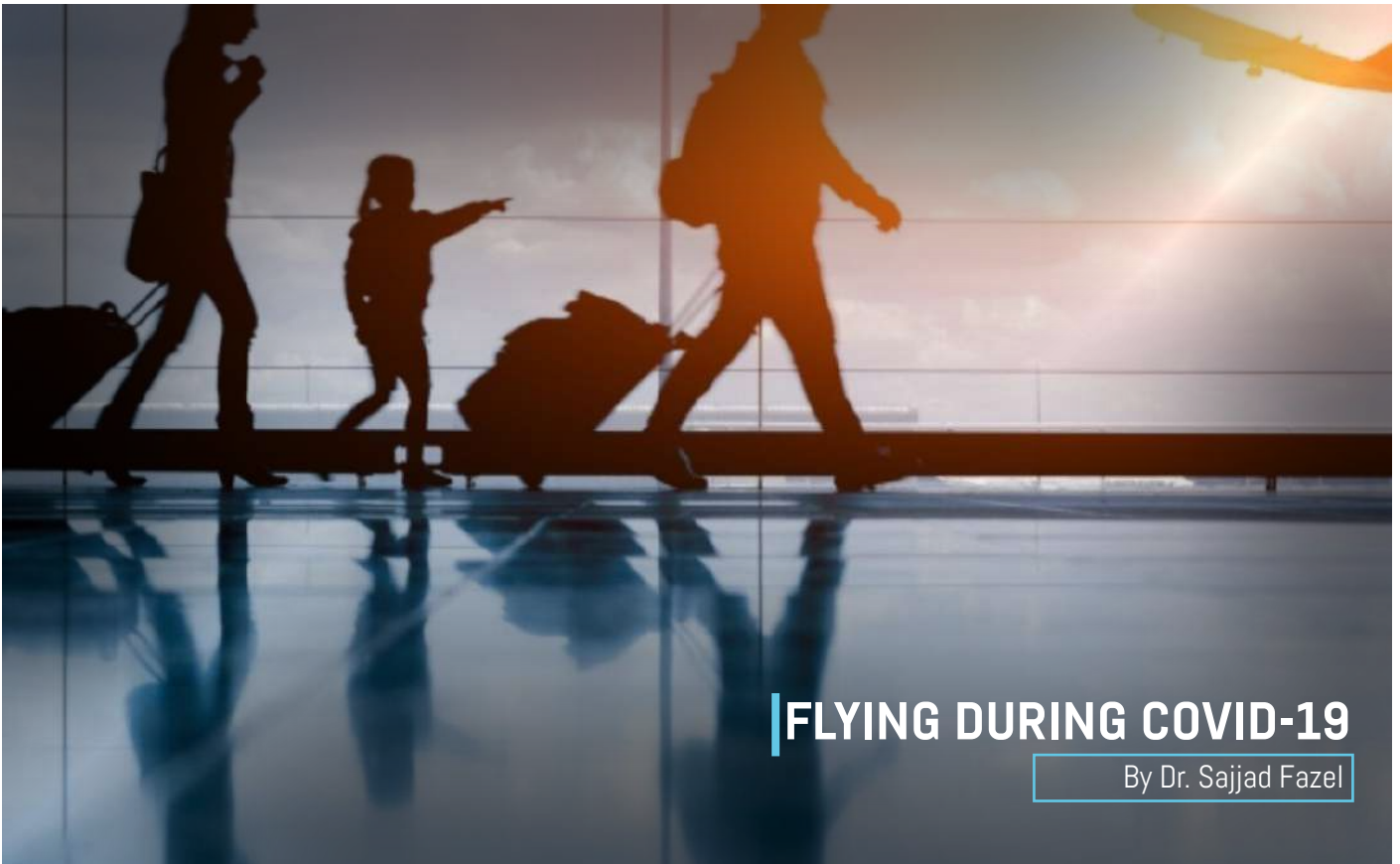
How does nanotechnology help in TREATING cancer? Our body has blood vessels, that are basically responsible for carrying important materials all over our body. Every cell in our body is surrounded by these blood vessels. One special thing about cancer cells is that, the blood vessels that surround the cancer cells are leaky, meaning they have small openings and spaces. In normal cells, the blood vessels are normal and sealed.

Nanotechnology uses this feature to their advantage. How? Scientists coat the nanoparticles with cancer drugs and then the nanoparticles are injected into our body cells, they will only be able to pass through the leaky blood vessels. This is super important because it ensures that the treatment doesn't mess with the normal cells. (normal blood vessels are closed hence particles can not enter)

Again external energy is used. Here, imagine nanoparticles are bombs, so when they are in the cancer cells and external energy is applied they will simply blow up and destroy those cancer cells.

Nanoparticles can also be made in such a way that they can directly attach to the cancer cells. Just like the bulb example above, the only difference being, now the bulb (nanoparticle) has specific cancer drugs on it, so when it attaches to the socket (cancer cells), it can destroy them.

All in all, as cool, interesting and hopeful nanotechnology in cancer therapy sounds, it is also very technical and difficult and comes with its fair share of challenges - and that is precisely how science works. Researchers will continue to work day and night to improve current methods and develop new ones to make sure cancer is treated in the best way possible.



FLYING DURING COVID-19

By Dr. Sajjad Fazel

As a public health researcher, I'm aware of the various risks involved with the novel Coronavirus 2019. However, despite this, I've travelled during this pandemic for a variety of essential reasons. As the economy begins to re-open and we slowly adjust to the new normal – flying safely is vital.

The Coronavirus spread quickly from China to other parts of the world late last year through travellers, and ensuring we don't make the same mistake again is crucial. Airlines have taken the safety of travellers very seriously by employing a series of measures that include checking the temperature and symptoms of travellers before boarding a flight, allocating distanced seating, ensuring HEPA filters are changed regularly, disinfecting the aircraft, and maintaining a constant flow of fresh air into the aircraft. While these measures have a significant role to play in keeping travellers safe during the flight, there's more we can all do to ensure our journey is safer - below are some tips that have helped me fly safely during this pandemic.

1. Essential Travel:

Fly only if it's essential and there's an urgent reason. This is not the time to fly for vacation or sightseeing. COVID-19 is still a threat and many countries, states, and provinces have seen a slight increase in cases due to re-opening protocols and loosening public health measures. While it's vital to get our lives back to

“normal”, it's equally important to keep yourself and your loves safe. Flying during the pandemic has serious risks and should only be done for essential or urgent reasons.

2. Physical Distancing:

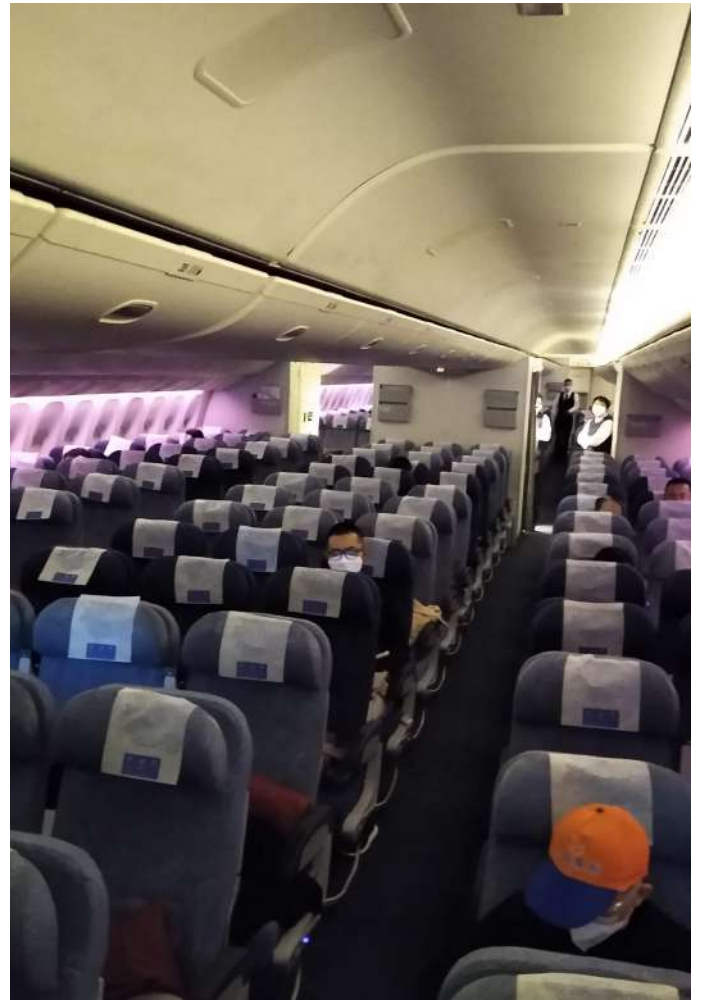
Yes, it's possible to distance yourself from others during travel. Physical distancing is one of the most effective ways of preventing COVID-19. Keep your distance from other travellers and airport staff when in the airport, boarding the aircraft or anywhere during your travel. Stay 2 metres apart from the next person in line and extend the arm of your carry-on bag to ensure the person behind you doesn't come too close. This also applies when boarding the aircraft. Wait for the person in front of you to place their bags in the overhead locker and take their seat before moving on to your seat. This is also applicable when landing - do not just stand up and crowd in the aisle while the aircraft taxis and parks. Remember safety is your main priority, wait for those in front of you to slowly disembark before you stand up and exit the aircraft while maintaining distance. Keep your conversations and interactions to a minimum - this is not the time to chit chat with others about your next holiday destination. A lot of airports have markings on the floor from security to the gate that indicate 2 metres distance and where you must stand - use this as a reminder and a guide to keep your distance.

3. Dab and Rub:

Always carry a hand sanitizer with you. Keep in mind that any surface you touch may have COVID-19, and hence you've to ensure that you sanitize your hands before you touch your face. After you check in your bags or print your boarding pass - put a dab of sanitizer on your hands and rub vigorously on your palm, back of hand, and fingers. When you finish the security check - dab and rub. When you're at the gate - dab and rub. After you've seated in the aircraft - dab and rub. Remember the hand sanitizer is your best friend. Some airlines provide you with Lysol or sanitary wipes - make sure you use these to rub the arm rests, the seat, the food tray, the air vents, the charging ports and any other surface you may touch during your flight.

4. Mask Up:

Masks are an added protective layer that may prevent others from being infected with COVID-19. Wearing masks is a duty you take on yourself for the sake of others. You wear a mask to protect other travellers and they wear a mask to protect you. There are several places during your travel that keeping a distance of 2 metres may be challenging - this is where masks come in handy. They stop the droplets from coughing, talking, sneezing or breathing from spreading too far. Make sure you wear a comfortable cloth mask that covers the bridge of your nose to the bottom of your chin. Comfort is key as it will ensure you don't touch or adjust your mask repeatedly. If you feel pain in your ears because of wearing the mask for too long, consider investing in a double loop mask, a self-tie mask, or a mask extender hook (this is a small plastic strip that pulls the ends of the mask to the back of your head so that your ears don't feel the stress of the elastic loop). Also, if you're wearing glasses, rub a dab of soap or glycerin on them before you put on your mask to avoid fogging.



In addition to the tips above, it's important to keep safety in your mind - this will help you make better choices while travelling during COVID-19. A small example is in regard to food and drinks. If you can have a meal at home and go to the loo before you leave the house or board the aircraft, you'll reduce the number of times you've to remove your mask or touch surfaces - this will ensure your flight is a little bit safer. There are many other small adjustments we can all make in order to ensure we reach our destination without compromising our own health and that of others.

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ACNE AND SKIN MICROBIOTA

By Sayyeda Riyaz Meghji



The overabundance of microorganisms that reside in and on the human body play a significant role in maintaining the health, onset and progression of diseases. Skin is the largest organ in the body which covers an average area of 1.8-2m³ in an adult. Our skin is home to millions of microorganisms such as bacteria, fungi and viruses that compose the skin microbiota.

Microbes are constantly in flux, changing along with environmental factors, diet plans, hormone level, antibiotics, sebum, stress and age. The bacterial composition differs between individuals and varies according to body sites. The face and scalp are covered with sebaceous areas which involve the survival of bacteria which can withstand the oily condition such as *Cutibacterium acnes* species.

The complex interaction between the skin and its microflora safeguards the skin from day to day environmental influence. Similar to those in our gut, skin microorganisms are colonized by beneficial microorganisms which serve as a physical barrier to prevent the invasion of pathogens. However, occasionally, because of an imbalanced relation, the barrier is disturbed between commensals and pathogens which leads to skin diseases such as atopic dermatitis, psoriasis, rosacea and acne.

Acne is caused by inflammation of the skin, and it mainly affects the sebaceous glands which produce sebum, the natural oil on the skin. Excessive oil and dead skin cells block skin pores and appear as blackheads which are breeding grounds for bacteria. *C.acnes* has been considered a primary suspect as an acne pathogen because during adolescence, hormonal changes increase oil production and creates a lipid rich environment which is a perfect niche for the growth of

C.acnes. Chronic stress produces the hormone cortisol and increases the amount of oil in the skin which mixes with dead skin and leads to breakouts.

A healthy diet is essential in preventing and treating acne. Certain food products such as pasta, white rice, white bread, sugar and heavy diet (carbohydrates, dairy and saturated fats – pastries and pies) raises the blood sugar and causes the body to produce more oil, increasing the risk of acne. Skin friendly food choices should include vitamin A and E, such as, spinach, broccoli, sunflower seeds, carrots, fish and sweet potatoes.

Excessive oil production and heat are the main causes of acne and water works great with both these issues. Not only drinking water but fruits and vegetables also keeps you hydrated and helps reduce body heat. Water reduces dry skin which is a result of dehydration. Dehydration leads to excessive oil secretion which gives way for bacteria to thrive especially *C.acnes* and cause painful pimples. In addition, water effectively manages sugar level by diluting the glucose present in the blood. It is advised to drink 6 to 8 glasses of water to improve skin elasticity and be free of blisters and pimples.

The prevalence of acne decreases with increasing age as sebum production is reduced. Antibiotics are normally prescribed for persistent acne but to support the gut, consider probiotic supplements during and after antibiotic therapy to help restore microbial balance. However, supplements are not recommended rather food products containing prebiotics (live microorganisms that support the growth of good bacteria within the skin) are encouraged, such as garlic, onion, bananas, oats and apples.

UNDERSTANDING YOUR THYROID

By Kulsoom Salim Kassam

Thyroid Diseases? Yes you heard it right. A rising problem in today's world! Commonly affecting females and in some cases, males.

The thyroid gland is a butterfly shaped gland located in front of the neck. It plays a crucial role in our body, more than what we are aware of! A defect in the thyroid gland affects the functioning of vital body organs including the heart, brain, liver, kidney and skin, as we shall see.

What does the thyroid do?

It secretes thyroid hormones into the bloodstream, which act on almost EVERY CELL in our body. They control how body cells use energy from food (a process termed as metabolism) and this affects body temperature, heart rate and how well you burn calories. If you do not have enough of these hormones, your body processes slow down. Thyroid hormones also work by controlling muscle and digestive functions, brain development and bone maintenance; hence awareness of its importance needs to be raised.

One can either have an underacting or an overacting thyroid, where a person's thyroid gland either produces fewer thyroid hormones than what their body requires (hypothyroidism) - leading to a slower metabolism, slower heart rate, weight gain as your body is slow in metabolism and other effects.

Or when a person's thyroid gland produces too much of thyroid hormones exceeding the body's requirement (hyperthyroidism) - leading to a faster metabolism, faster heart rate, and effects opposite to those of hypothyroidism.

When to get a thyroid check up?

When you notice any of the following;

- Excessive unexplained weight loss or weight gain
- Irregular menstrual cycle
- Chronic constipation or diarrhea
- Red, swollen, uncomfortable eyelids
- Puffiness and bulging of the eyes
- Goiter – front part of the neck swollen
- Slower or faster heart rate
- Tiredness, depression or memory problems
- Stiffness in joints or muscles
- Having someone in the family with a thyroid condition
- In children: Delayed puberty, poor growth, delayed teeth development and mental development



As soon as a thyroid disease is diagnosed, it is very necessary to seek treatment in order to improve one's overall wellbeing. Not treating it can have its consequences, which commonly include but are not limited to:

- Heart problems (high BP, heart diseases)
- Infertility
- Mental health issues
- Nerve injuries
- Elevated cholesterol
- Anxiety, depression, nervousness, panic attacks and insomnia

Care for your thyroid

- Have a diet containing moderate amounts of iodine – Too much or too little may trigger a thyroid disorder.
- Avoid high calorie diets
- Quit smoking
- Get a check up as soon as symptoms are experienced in order to allow early treatment before the condition worsens.



By Dr. Hussein Karim Manji

EMERGENCY MEDICINE: A UNIQUE SPECIALTY

2020 brought with it the fires that raged across Australia, air and drone strikes that killed thousands across Iraq, plane crashes in Ukraine and Pakistan, devastating floods across India and East Africa, riots in Delhi and Hong Kong, volcano eruptions, locust outbreaks through parts of East Africa and South Asia in the worst infestation for a quarter of a century down to earthquakes whose tremors shook us all and of course, the COVID-19 pandemic which seemed to be all people spoke about or read about for the entire half of the year. The year 2020 will be etched in the minds of those who lived through it. But together with everything else it brought, this year brought a deep sense of appreciation on a global level for our frontline in health care. It also raised the recognition and awareness of emergencies and what they entail.

Imagine walking into the hospital to start your day – ambulances are blaring, the waiting room is clamoring, babies are crying. You stroll through this sea of humanity and eventually arrive at your workstation. After setting your bag down, you prepare the basic tools of your trade: a stethoscope, a fresh cup of coffee, and a sharp mind. Taking a deep breath, you prepare for the routine of yet another shift. But there is no “routine.” There is only the excitement and variety of what is about to come through those doors. That door is the only barrier that separates you from the thousands of people with a multitude of medical ailments, any one of which could bring them to your doorstep. And before you know it, these doors part to reveal your next patient. To them, it is probably the worst day of their life. For you, it’s another Tuesday.

Who will be your next patient? Is it the 4-year-old boy with the asthma attack gasping for that next breath? Will it be the 78-year-old widower who fell at home while fixing himself a sandwich? Maybe it’s the 31-year-old female who just got knocked by a bodaboda crossing

the street; oh, did they also mention she’s 28 weeks pregnant? You look over and see new patients filling the rooms and the trauma bay. No matter what walks through that door, you’ll be ready. With adrenaline always pumping, it’s time to get to work. Today is going to be another routinely awesome day.

Before discussing where the field is going, it’s important to know a little background on where it has been. The specialty of emergency medicine has evolved drastically over the last several decades and continues to be an increasingly popular choice among graduating medical students. Only a decade ago, casualties in our country were staffed by physicians with a variety of training backgrounds. The vast majority of these physicians had little to no emergency medicine training at all. General surgeons, family physicians, neurologists, and even psychiatrists were among those that staffed casualties in the country and throughout the world.

But since the establishment of the first emergency medicine residency programs in 2010, the specialty has continued its rapid development in defining its place in the house of medicine.

Emergency medicine is a fast paced, team oriented, dynamic specialty that focuses on the rapid evaluation and treatment of a diversified patient population consisting of both pediatric and adult patients. As the initial provider for many of their patients, the emergency medicine physician is charged with the rapid assessment and data gathering needed to launch the initial workup and management of a wide variety of complaints that bring patients to the ED. Their work has an incredible influence in the patients’ care as it generates the driving force for further medical evaluation; whether the patient is admitted to the hospital or discharged home, the emergency physician plays a huge role in directing both short and long term care well after their stay in the emergency department.

Variety is the spice of the EM life. There is no set routine or expected patient list for the day. In the short span of a shift, you may diagnose tonsillitis and pharyngitis, intubate an unresponsive patient who overdosed on heroin, reveal a cancer diagnosis to a young patient with flu-like symptoms, reduce a dislocated hip, place a chest tube in a patient with a hemothorax, and resuscitate a patient undergoing a cardiac arrest. Your next patient could be a six-year-old or a 75-year-old, both with abdominal pain. In a setting where some may see chaos, EM physicians find order. It's exciting. It's energizing. This diversity is a uniquely challenging aspect of the medicine practiced in the emergency department.

EM physicians pull from a knowledge base that spans all medical specialties including pulmonology, cardiology, gastroenterology, trauma surgery, nephrology, ophthalmology, psychiatry, and neurology. Jack of all trades? Sure. Master of none? Not even close. The gap between the medical and surgical specialties is bridged within the practice of emergency medicine. The combination of a broad knowledge base with the need to develop a focused procedural skill set makes the EM physician a veritable Swiss Army Knife within the house of medicine. From endotracheal intubation,

cricothyroidotomy, fracture reduction, and central line placement to pericardiocentesis, thoracotomy, chest tube placement, and lateral canthotomy, even the most enthusiastic proceduralist will find his hands full working in the ED.

Every single day, you or a person around you experiences an emergency of some sort. If you don't believe that, tune in to any news channel and every day you'll find enough to depress you. Have you ever heard the saying, "Ignorance is bliss"? Well, that may as well be true when it comes to perceiving the dangers that surround us at any given point in time wherever we may be. If we were to realize how fragile the human body is and how we are literally at the brink of an emergency at any and every moment of our lives, we would tread ever so carefully. The saving grace lies in now knowing that there are specific doctors who are equipped with staying calm and tackling acute situations from the get go and this should help us sleep better at night. That being said, know your basic first aid and life support or go learn them, have an individual and collective emergency plan for any situations at home and at work, stay safe and keep your fingers crossed for the rest of 2020 to remain as calm as an EM physician.

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COVID-19 - A FRONTLINER'S PERSPECTIVE

By Dr. Faisal Hooda

Sirens going-off continuously, one sickly patient after another: ferried-in breathless, hypoxic and spiking fevers. Once it started, it just kept on snowballing, picking-up pace, sparing no-one in its path. It was like a dark cloud had suddenly emerged from nowhere, covering the atmosphere in a tight but silent grip of disease and death.

In came patients of various ages, shapes, and sizes: with one thing in common..Yes, CoVID-19 was here, it had come in its full pomp and vigour. As frontline healthcare workers; me and my colleagues had the Herculean task of confronting the havoc that had been unleashed by this beastly 'new' microscopic pathogen.

At first it hit me hard and my reactions were those of distress, shock and utter disbelief. I wanted to run away from it all, and duck my head in the 'sand-pit' of oblivion, pretending that nothing was happening. But then, a spark of servitude, selflessness, and humanity seeped-in and I sprung into action.

It was akin to a war-zone, with the battlefield being cordoned off no-go-zones, our head-to-toe PPE armour, multiple layers of special filter facemasks, wielding our stethoscope as a weapon in our hands. Many a critical patient arrived: intubations and ventilated individuals, those who required tube insertions by puncturing the chest wall, numerous central lines inserted in patients who had life-threatening low blood pressures from overwhelming infection, those who needed immediate dialysis for renal shutdown, some made it out, sadly some eventually succumbed. Thankfully, and what is striking is that most individuals that came-in were fine, and were advised simple isolation at designated facilities

or at a separate living space of their convenience. But besides just the physical illness component, there was a much deeper psychological under-tone to the whole pandemic, which was the stigmatisation of CoVID suspects and patients, with the associated dire social restrictions with each individual being cocooned in a shell of personal solitude, and heightened mistrust between all individuals in society as anyone could be a potential carrier! These events lasted for a few weeks, but then eventually numbers have subsided to virtually negligible.

In the end, everything has a positive aspect to it, the pandemic squeezed us healthcare professionals to do the best that we could possibly offer; by sailing in uncharted waters and by putting our 'neck on the line' to save lives.

It has also brought about better appreciation of the little things in life, has fostered a sense of God-wariness and caring for others. We need to keep this spirit alive by continuing similar measures by not letting down our guard; including maintaining hand and respiratory hygiene.



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CARDIAC ARREST

On an average, a normal heart beats about 115,000 times each day, and it pumps about 2,000 gallons of blood around the body every day. The blood pumped provides oxygen and important nutrients to the body tissues and removes metabolic waste from them.

Cardiac arrest refers to when your heart suddenly stops beating. This cuts off blood flow to the brain and other important organs of your body. When this happens, the organs do not receive sufficient oxygen and the metabolic waste products start to accumulate in the organs leading to harmful effects. Cardiac arrest is an emergency and is deadly if not treated immediately.

Cardiac arrests occur when a diseased heart's electrical system malfunctions. This malfunction causes an abnormal heart rhythm and finally cessation of the activity.

There are various causes of cardiac arrest, the reversible causes include low oxygen intake in the body, lung injury, poisoning, imbalance of electrolytes in the body, temperature abnormalities, and blockage of the arteries supplying the heart and the lungs.

There is often confusion between heart attack and cardiac arrest, heart attack occurs when there is a blockage to arteries supplying the heart whereas the latter just refers to the cessation of heart activity. A heart attack often leads to cardiac arrest if the lack of circulation to the affected portion of the heart continues without treatment, resulting in the electrical malfunction and associated loss of effective heart

pumping.

When a cardiac arrest sets in, the victim loses consciousness and stops breathing. Because the heart has stopped, the victim will have no pulse. Action must be taken immediately, as the victim's chance of survival decreases by about 10% with each passing minute. Normal heart function must be restored within about 10 minutes, preferably less.

Almost all instances of cardiac arrests are reversible if treated immediately. If you see someone who is experiencing cardiac arrest, call for the emergency medical services immediately. There are two steps required to restore the victim's heart rhythm and save their life including cardiopulmonary resuscitation (CPR) and heart defibrillation while treating the reversible causes of the arrest.

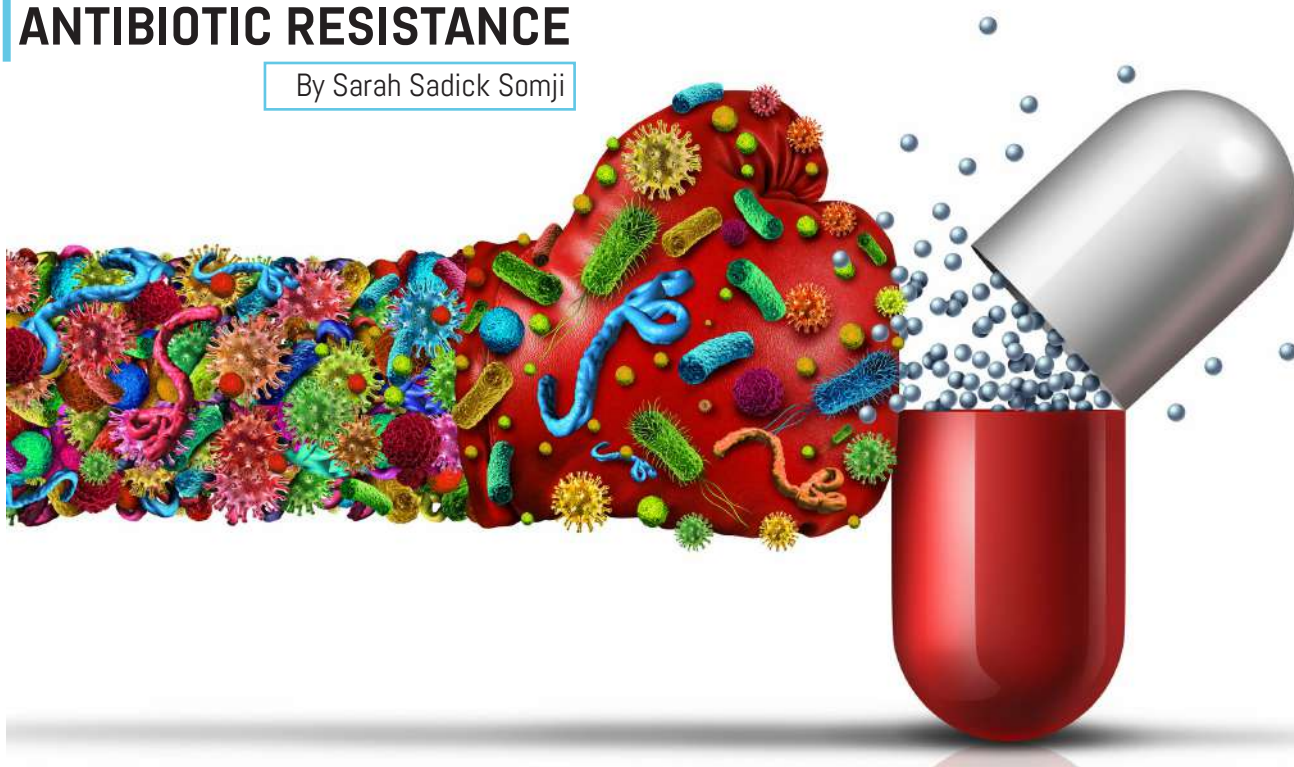
The most important prevention measures one can take is to live a heart-healthy lifestyle by maintaining a healthy weight, eating the right foods (reduce sodium, sugar, and saturated and trans fats), avoiding risky lifestyle factors like smoking, exercising daily and having frequent checkups to screen for heart diseases.

All in all, your heart affects every part of your body. That also means that diet, lifestyle, and your emotional well-being can affect your heart. Emotional and physical health are both important for maintaining a healthy heart. If you have a healthy heart, you can enjoy a happy and long life.



ANTIBIOTIC RESISTANCE

By Sarah Sadick Somji



You realise you have a fever. You get a blood test. Your doctor confirms you have a common infection. You get antibiotics. You feel better on day three. You stop having antibiotics. You think you are cured! But you have actually created germs that are resistant to that antibiotic!

It is weird right! When you fall sick, you are told to have antibiotics to kill those germs but I just said you created stronger germs! This is exactly the conundrum in the public health field. Antibiotics, which are the only form of treatment, are widely used in treating patients worldwide. However, we have been overusing and unnecessarily using antibiotics for treatment. Let me explain in detail how this happens.

Firstly, we use antibiotics for everything! Cough, cold, fever, malaria, etc. Antibiotics are only useful when there is a bacterial germ that causes the infection. These do not really help when we are affected by a virus. Nevertheless, we have an antibiotic anyway.

As for when a bacterial germ infects your body, it replicates and spreads because it has a place to grow now. This triggers your body to start fighting it, and this is why you feel sick. Once you have a tablet of an antibiotic, you reduce the number of germs, you don't kill ALL the germs. Think of it like a glass full of water where the water is the germs. Every time you have a tablet of antibiotic, it is like you've poured out some water off the glass. This means, the water has reduced, but the glass is NOT empty. After pouring out a little water every time, you reduce the water significantly, maybe leaving it 2/3rd empty. This still does not mean that the glass is empty. It just means that you can see

more of the glass as an empty container with a little water remaining. Similarly, when we have a few doses of antibiotics, we feel better because that glass full of germs has reduced. Hence, our body does not require to put in a lot of energy to kill those few germs. But remember, if these germs did not die during the first few rounds of antibiotics, then they must be stronger and can be more harmful in the long run! If those few germs are not attended to, then they will become stronger and will eventually not be killed with the antibiotic first used. This is called antibiotic resistance. According to WHO, drug resistance could be the cause of 10 million deaths per year by 2050. Therefore, step one is for us to serve as responsible individuals by use the antibiotics reliably, only when necessary and complete the entire dose when taking them.

The field of public health works on issues as described above. It is defined as the science of preventing diseases and improving health of the population. The role of a public health specialist or researcher is to detect health threats to the population, study it and identify its trends as well as measures to protect the population from it. This is a vast and dynamic field that includes health education, research, health data analysis, developing health systems and much more. Getting into the field of public health allows you to contribute towards groundbreaking research as well as fulfil the bigger aim of saving lives!

"Whoever kills a soul...it is as though he had killed all mankind, and whoever saves a life is as though he had saved all mankind..." - Qur'an: Surah Maidah (5), Ayah 32.

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ANXIETY

By Fatemazehra Haider Rajpar

Anxiety is a normal and often healthy emotion. It helps us handle situations that may be perceived as fearful, such as when you have an important presentation or when going in for an examination. When the stimuli – the event that usually triggers it – is removed, the feeling of anxiety also normally goes. However, when a person regularly feels excessive levels of anxiety, which are out of proportion compared to the stimuli (if present) and interferes with daily function, it may be a medical disorder. In the context of a diagnosis, the term ‘fear’ is used to define the normal anxiety that someone feels and the term ‘anxiety’ is used for the disorder.

The American Psychological Association (APA) defines anxiety disorder as having recurrent intrusive thoughts or concerns and excessive worry. The symptoms often include:

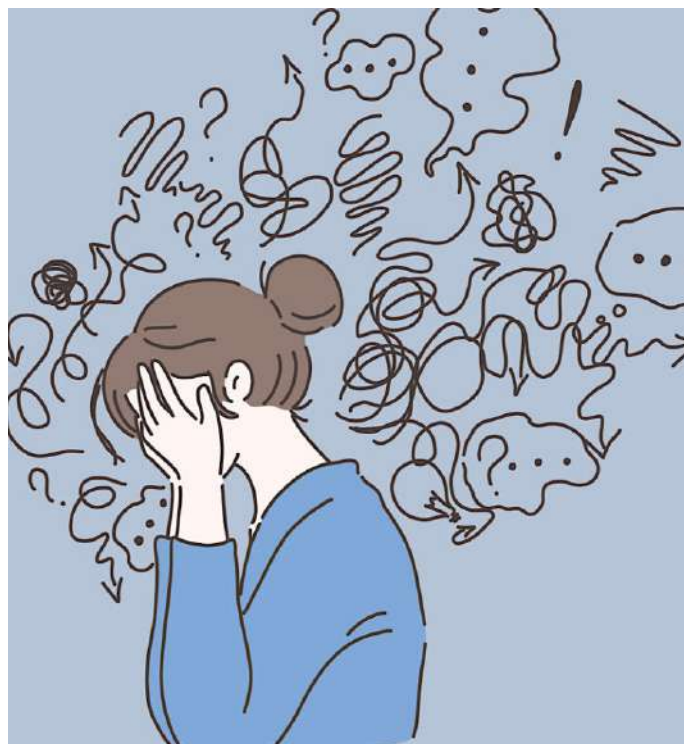
- Restlessness, and a feeling of being “on-edge”
- Being easily fatigued
- Uncontrollable feelings of worry
- Increased irritability
- Concentration difficulties
- Sleep difficulties (falling or staying asleep)

While these symptoms might be normal to experience in daily life, people with generalized anxiety disorder (GAD) will experience them to persistent or extreme levels and it will be difficult to control. GAD may present as vague, unsettling worry or a more severe anxiety that disrupts day-to-day living.

Adults with GAD often worry about every day, routine life circumstances, such as possible job responsibilities, health and finances, the health of family members, misfortune to their children, or minor matters (e.g., doing household chores or being late for appointments). While children with GAD tend to worry excessively about their competence or the quality of their performance. During the course of the disorder, the focus of worry may shift from one concern to another.

The causes of anxiety are complicated. They may occur at once, interacting with each other to produce the anxiety disorder, and some might not lead to an anxiety disorder unless another is present:

- Environmental stressors such as difficulties at work, relationship problems or family issues.
- Genetics. People who have family members who have an anxiety disorder are more likely to experience the disorder themselves.
- Medical factors such as the symptoms of different diseases, the side effects of medications or the stress of intensive surgery or prolonged recovery.



- Brain chemistry. Many anxiety disorders have been defined by misalignments of hormones and electrical signals in the brain.
- Withdrawal from illicit substances.

In some cases, a person may be able to calm him/herself down at home without clinical supervision. These methods include stress management skills, relaxation techniques (such as meditation, deep breathing and yoga), exercises to replace negative thoughts with positive ones, having a good support network of friends and family and physical exercises.

However, this may not be effective for several or long term episodes. A person may require professional help including psychological counseling, cognitive-behavioral therapy (CBT), psychotherapy or a combination of therapies. Medications may also be prescribed by a psychiatrist as appropriate.

There are ways to reduce the risk of an episode occurrence. These include reduction of intake of caffeine, tea, soda or chocolate, maintaining a healthy diet and avoiding recreational drugs or illicit substances. Maintaining a regular sleep pattern is also important alongside an active lifestyle.

“O you who have believed, seek help through patience and prayer. Indeed, Allah is with the patient” (Qur’an - 2:153). Patience is difficult, but it is important. Combined with prayer and remembrance of Allah, it may assist one to feel calm.

ATTENTION-DEFICIT HYPERACTIVITY DISORDER

By Sanaa-e-Fatema Khalfan

Attention Deficit Hyperactivity Disorder (ADHD) is one of the most common neurodevelopmental disorders of childhood. It is usually diagnosed in childhood and often lasts into adulthood. Children with ADHD may have trouble paying attention, controlling impulsive behaviour (may act without thinking about what the result will be), or be overly active.

Managing Symptoms: Staying Healthy

Being healthy is important for all children and can be especially important for children with ADHD. In addition to behavioral therapy and medication, having a healthy lifestyle can make it easier for your child to deal with ADHD symptoms.

Here are some healthy behaviors that may help:

- Developing healthy eating habits such as eating fruits, vegetables, whole grains and choosing lean protein sources
- Participate in daily physical activity based on age
- Limiting the amount of daily screen time.
- Getting the recommended amount of sleep each night based on age.

Signs and Symptoms:

It is normal for children to have trouble focusing and behaving at one time or another. However, children with ADHD do not grow out of these behaviours. The symptoms continue, can be severe, and can cause difficulty at school, at home, or with friends.

A child with ADHD might:

- daydream a lot
- forget or lose things a lot
- squirm or fidget
- talk too much
- make careless mistakes or unnecessary risks
- have a hard time resisting temptation
- have trouble taking turns
- have difficulty getting along with others

Causes of ADHD

The cause(s) and risk factors for ADHD are unknown, but current research shows that genetics plays an important role.

In addition to genetics, scientists are studying other possible causes and risk factors including:

- Brain injury
- Exposure to environment (e.g. lead) during pregnancy or at a young age.
- Alcohol and tobacco use during pregnancy.
- Premature delivery.
- Low birth weight.



Types

There are three different types of ADHD, depending on which symptoms are strongest in an individual:

- *Predominantly Inattentive Presentation:* It is hard for the individual to organize or finish a task, to pay attention to details, or to follow instructions or conversations.
- *Predominantly Hyperactive-Impulsive Presentation:* The person fidgets and talks a lot. It is hard to sit still for long. A person with impulsiveness may have more accidents and injuries than others.
- *Combined Presentation:* Symptoms of the above two types are equally present in the person. The Because symptoms can change over time, the presentation may also change over time.



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BREATH - THE FINEST GIFT OF NATURE

By Dr. Arzoo-e-Zainab M. Hemani

A two year old presented at a clinic. The mother reported that the child has been having cough, which has lasted for about three weeks now, it worsens during the night and early morning hours and is accompanied with a whistling sound. The symptoms are usually recurring every few months. Is it Asthma she asks? Will my child be okay or will he/she have to live with it? Will he/she have a normal life like other children? What can I do to help my child?

Asthma is a common condition that can make it hard to breathe. It does not always cause symptoms but when a person with asthma has an “attack” it can be terrifying. This happens because the airways in the lungs become chronically inflamed and narrow. Thus, a child can have repeated episodes of cough, difficulty in breathing, a feeling of tightness in the chest and wheezing (whistling sound on breathing out). The cough can particularly be worse during the nights or early mornings but that’s not necessarily the case for all.

At what age can it start?

In most children with asthma, the symptoms start below the age of 5. However, it is difficult to diagnose asthma in very young children as there are other conditions that can closely mimic asthma which include but are not limited to; Acid reflux disease, Dysfunctional breathing, Airway abnormalities or Respiratory tract infections that infect the lungs and breathing passages.

Is it hereditary?

The combination of genetics and exposure to certain environmental triggers causes asthma. The risk of developing asthma is higher if a parent or a sibling has asthma. The risk of developing asthma is also

higher if the child has other allergic conditions like eczema (skin condition), allergic rhinitis (runny nose, sneezing, congestion, red, itchy and watery eyes) and food allergies.

How can you prevent your child from developing asthmatic attacks?

In some children, the triggers of asthma can be identified. These include viral infections, exercise, exposure to tobacco smoke and allergens like house dust mite, pollen, pets and certain foods. In these children, flu vaccine/shots and limiting or avoiding exposure to these triggers can prevent or minimize the asthma attacks.

How long does it last? Forever?

Some children may “grow out” of their symptoms. Rest of the children particularly those with other allergies and strong family histories of asthma develop chronic symptoms. However, it is important to remember that with appropriate management of the disease, your child can lead an active normal life like other children.

What can you do to alleviate the symptoms?

Once a diagnosis of asthma is confirmed, your child will be given an asthma action plan containing the medicines to be given during an asthma attack. It may be useful to share the plan with other people involved in the child’s care. If the attacks are frequent or severe, your doctor may discuss with you regarding the medicines to prevent or control the disease. Monitoring and keeping of records regarding attack frequencies, triggers, symptoms presented and how control is achieved is crucial.



Is there anything more you can do?

1. Learning the correct inhaler technique is vital in efficient management of your child's condition.

Steps:

- Assemble the spacer, if required
- Hold the inhaler upright and shake well before each use
- Place the inhaler mouthpiece into the end of spacer
- Tilt chin up and breath out
- Place the mouthpiece into your mouth and make a good seal with your lips. If using the spacer with a facemask, make a good seal over mouth and nose
- Press one puff from inhaler into spacer, Breath in and out for 15 to 30 seconds, maintaining the seal, repeat the above steps for additional puffs.

2. Your doctor, you and your child need to work together to make an asthma action plan, this is a list of instructions that will guide you as a care taker in supporting your child such as;

What medicines to be used each day at home and at what time?

- What warning symptoms to watch out for? And

- When to rush to the Hospital in case of an emergency.
- Along with medication you might need to use a device called Peak Flow Meter. This device is used at home to see how well your child's lungs are working and thus helping with long term prognosis.

3) In line of COVID-19, it is especially important that you take measures to avoid getting sick. Which includes staying home as much as possible, wearing a facemask and washing hands often. If your child takes medications to control their asthma they should keep taking them as usual. If you think your child has COVID-19, Call the Health Care System serving your Neighborhood and follow the local guidelines.

Going back to the patient scenario that we started with, we have seen that diagnosis of Asthma in children is challenging, A good history and physical examination are key factors in diagnosis. Often a diagnosis may not be made at the first doctor's visit but after recurrent symptoms are found to be present. It is how the parent, child and doctor work together to achieve the best results. Asthma might be a debilitating disease but with right treatment and care it is easily controllable.

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DENTAL MYTHS AND MISCONCEPTIONS

By Dr. Sukaina Khimji-MohammedZameen

Being a Doctor of Dental Surgery (DDS) oops! Sorry for the complicated title I used here, in simple terms being a Dentist, I have come across various types of misconceptions about dental visits and the profession as a whole. That's when I decided to write about this and decode few myths, educate and create awareness within our community and the world at large.

MYTH #1: Dentists are not doctors, they study the teeth only and have nothing to do with the body - It is true that we concentrate on managing one's teeth but our course entitles us to work with the head and neck area and teaches us on how to manage a patient as a whole. The first 2 and half years we study with Medical Doctors and go for rounds in General Surgery and Internal Medicine wards. We treat all our patients according to their conditions and advise them to visit their physicians whenever necessary prior management. Hence, next time your dentist gives you some medical related advice, please take it seriously and don't ignore it.

MYTH #2: The harder I brush, the cleaner my teeth will get - Many patients say this phrase, and are sure that this is the best way to get cleaner and whiter teeth. This is not true. If you have ever done this before, after reading this you should stop! Brushing your teeth with a hard toothbrush and with a lot of force causes your gums to hurt and move upwards from its original position. The gums tend to swell and cause exposure of the roots. This condition is called Cervical Abrasion, it brings about high tooth sensitivity and severe pain when having hot/cold food and drinks. It affects the chewing ability of an individual. Therefore, let's shift to using a softer brush and less force whenever we brush to help protect our gums and teeth for a long time.

MYTH #3: Pregnant women should not be visiting the dentist as it is very harmful for their health - This is not true, instead women who are trying to conceive or are pregnant are more prone to dental problems than a normal individual. This is because their bodies are undergoing changes in hormones which can affect their dental health. Pregnant women are advised to go for a visit every 3 months to be sure of early detection and management of caries or gum problems and prevent further damage.

MYTH #4: It is only baby teeth, it's going to be replaced anyway, it's not necessary to visit the dentist - A temporary tooth has the same amount of importance as a permanent tooth. If it is decayed, it needs to be seen by a dentist and worked on accordingly as their teeth are equally important during functions like



chewing, speech and aesthetics. Their teeth also play a major role in allowing a good pattern of eruption of the permanents. If they are well taken care of, your child will have good oral health (proper brushing and flossing) which will also lead to healthy permanent teeth. So parents be comfortable to bring your children to their dentists.

MYTH #5: Teeth are naturally paper white in color, any yellow discoloration is not normal and should be worked on - The real deal is that our natural teeth are NOT paper white but white with a slight tinge of yellow especially towards the gums. The yellow color is very natural, it is the dentinal part of the tooth that comes after the enamel.

MYTH #6: Root canals are painful - This is a common belief. Root canals actually remove the diseased nerve and bacteria from the tooth while disinfecting and finally sealing the space so that no future infection can occur. Whenever the infection is removed, there is an instant relief, the tooth starts to recover and the patient feels better by the next Root Canal visit. There should be no worry for undergoing a root canal, be well informed.

MYTH #7: I brush my teeth nicely, I don't need to floss - This is wrong! Brushing cleans only 65% of your teeth, what about the remaining 35%? These surfaces are in between your teeth which the toothbrush cannot reach. Only dental floss can remove food debris that is stuck in those areas. Neglecting to floss may lead to cavities you won't even notice! Flossing is a patient's best defense against Periodontal Gum Disease, which is the number one cause of tooth loss in adult patients. Despite all the myths talked about, our very own Prophet (SAWW) used to encourage proper oral health. He used to practice brushing using the miswak which was the toothbrush then. He cleaned his teeth after every meal. As Muslims, we need to follow the sunnah and reflect on this deed as it was done by the best of believers who would only practise what benefits us. Hoping my knowledge will help you in the future as you book your dental appointments!

:) KEEP SMILING (as long as you have your teeth)

PHYSICIAN ASSISTANTS

By Badriya Chandoo-Esmail



As the healthcare industry becomes more specialized and complex, healthcare providers are working in teams to provide comprehensive, cohesive, and consistent patient care. Patients no longer interact only with nurses and physicians; now, they see a number of professionals who play different roles in the patient's treatment with one objective: to ensure the best possible care for that patient.

One vital member of any healthcare team is a Physician Assistant, or PA. PAs are licensed medical professionals who are formally trained to examine patients, diagnose illnesses, develop and manage treatment plans, order and interpret laboratory tests and scans, prescribe medications, and assist in surgery. PAs often serve as principal healthcare providers and have worked in this capacity since the profession was founded in 1967. Over 140,000 PAs practice medicine in the United States and, in 2019, the Bureau of Labor Statistics found it to be the fifth-fastest growing job in America.

The title "Physician Assistant" gives rise to many misconceptions about a PA's level of authority and responsibility. For example, many patients assume PAs can only interact with patients under a doctor's direct supervision. This is untrue. PAs can practice autonomously and can see their own patients. As essential members of a healthcare team, they collaborate with healthcare providers, regularly opine on diagnoses, and make recommendations regarding treatment. No state in the United States requires a physician to be on site every time a PA sees a patient.

PAs are less burdened by patient quotas than doctors are and, as a result, can have a tremendous impact on a patient's quality of care. I first saw the importance of a PA after I earned my Bachelor's degree in Integrative Biology from the University of California, Berkeley. I shadowed Jane Wu, a certified Family Medicine PA who practices in the United States (California). On my first day, Jane met with a variety of patients, ranging from those with abnormal labs to those with breast lumps. I watched her consult her patients with kindness

and compassion. She spent the time she needed with her patients to better understand their problems and developed tailored treatment plans accordingly. At the end of that day, we discussed the importance of considerate, thoughtful and thorough bedside manner practices required of providers. That day, I witnessed the importance of compassion and empathy in medicine and how, for a PA, empathy and medicine are two sides of the same coin.

Studies and research support the notion that PAs are critical to the current healthcare configuration. According to the 2014 Harris Poll, 93% of patients said PAs are trusted healthcare providers, 92% said having a PA makes it easier to get medical appointments, and 91% said PAs improve the quality of healthcare. This makes sense because PAs, unlike physicians, are versatile. Although PAs follow a medical school curriculum and then spend thousands of hours training alongside physicians, PAs are trained as generalists. They have flexibility and can work in any specialty throughout their career. They can also work in any setting, including hospitals, outpatient clinics, and schools. At the peak of the COVID-19 pandemic, PAs and physicians from different departments flocked to Intensive Care Units to care for critical patients. Many doctors found this transition difficult, but PAs transitioned smoothly, in large part due to their training and flexibility.

When I debated between medical school and a Physician Assistant program, I did a lot of research. It became clear to me that, if I wanted to be a versatile healthcare provider who could spend time with her patients, I needed to be a PA. It was an easy decision to make once I researched job satisfaction. This year, the PA profession is ranked third on U.S. News' renowned Best 100 Jobs list and #2 on its Best Healthcare Jobs list. As an aspiring PA, I am proud of my profession. The world of healthcare continues to evolve, and I am certain PAs will continue to play an expansive, increasingly vital role in ensuring that all people and communities receive the best care available.

10 TIPS FOR WHEN YOU VISIT THE DOCTOR

By Dr. Mohamed Manji

A visit to the doctor, either because you are unwell or because you are taking someone who is unwell, can be a challenging task. I have tried to summarize 10 important tips to try and assist you in your visit to the doctors;



1. Visit a doctor that you trust: This cannot be emphasized enough. There is nothing more disappointing than a visit to a doctor whose opinion you cannot trust. An important exception to this rule is when there is an emergency. Emergencies are unpredictable and may occur at any time. A golden rule here is never to delay an emergency like chest pain or trauma, but rather have the patient visit a trusted emergency department to settle any crisis that may be there before your doctor can come onboard.
2. Try and schedule an appointment: As much as we expect the best from our doctors, certain factors like pending surgeries, wheeled in emergencies, ward rounds cannot be compromised. These may mean your unannounced visit may suffer delays. For day care clinics, try your best to avoid impromptu visits during closing time especially if the condition is routine and doesn't require urgent checkup (like a rash that has been there for 3 months).
3. Respect the queue: First come first served is the rule, however certain high risk patients or patients who display some emergency signs may have to see the doctor first. Please be patient. The doctor is usually well aware of the queue outside. But with healthcare, caution is always better than speed.
4. A visit to the doctors is not a social visit: Your doctor will ask you important questions about your illness. The answers you provide will determine how well your doctor is guided to diagnose and treat you. Take all relevant blood tests or other reports for your doctor to see. Take all your regular medicines also for your doctor to see. The visit works best if the person accompanying the patient is the direct care giver of the patient and lives with the patient so that important historical details are not missed.
5. Expect your doctor to be diligent, ethical and competent: Ask him or her any question to keep yourself well informed of the problem and the potential treatment options.
6. Take your patients to the doctor in a timely manner: Avoid unnecessary delays especially in time sensitive matters.
7. Be regular with follow up appointments: Always respect the follow up date provided to you and make arrangements not to miss it. Minor treatment changes made by the doctors during such follow ups help avoid major illnesses and hospitalizations as a result of missed clinics.
8. There is a difference in being well informed for your consultation versus dictating your own treatment: Googling symptoms and making your own diagnosis before seeing the doctor is not often helpful and will make you anxious. A better approach would be to ask your doctor to recommend any important reading material to keep you well informed.
9. Second opinions are healthy: For complicated cases, or simply because you are unsatisfied with your consultation, you are entitled to seek a second opinion. In many instances, especially if the diagnosis is difficult, the doctor initiates the request of a second opinion. It is important to note that while a second opinion is encouraged, you must obtain it from another credible source after your due diligence if it is to add value to the consultation.
10. The only true healer is Allah (swt): While your doctor will make every effort to treat you, your ultimate recovery is not in your doctors hands. Dua's for the sick and especially by the sick are equally as important. How many non-salvageable cases have recovered. And how many seemingly simple cases have turned complicated despite full attention.

Hopefully these tips will be useful for you and your loved ones when you have to visit the doctor.

SUBSTANCE ABUSE

By Dr. Shaina Yusuf

Substance abuse refers to the harmful use of psychoactive substances including alcohol, illicit drugs and pharmaceutical drugs. These substances can lead to dependence syndrome—a cluster of behavioral, cognitive and physiological phenomena that develop after repeated substance use and that typically include strong desire to take the drug, difficulties in controlling its use, persisting in its use despite harmful consequences. It becomes a higher priority given to drug use than other activities and obligations, increased tolerance and sometimes a physical withdrawal state.

According to WHO the burden of substance abuse leading to morbidity and mortality is high globally. WHO estimates are as follows:

- The Harmful use of alcohol results in 3.3 million deaths each year.
- 38.3% of the population actually drinks alcohol.
- 31 million have drug use disorder.
- 11 million people inject drugs, of which 1.3 million are living with HIV, 5.5 million with Hepatitis C and 1 million with both Hepatitis C and HIV.
- Drug use is directly or indirectly responsible for 11.8 million deaths each year.

In Tanzania, in 2011 The Drug Control Commission reported that the number of people who are addicted ranges from 150,000 – 500,000. Most of the people involved are youths. The common illegal drugs in Tanzania are Khat, marijuana, heroin and cocaine. These estimates underestimate the actual problem as recent data are not available and alcohol being a legal substance is not taken in this list. These numbers also don't include the pharmaceutical agents that also get abused. Thus, the problem of substance abuse is much more than what is reflected in society. The major cause of substance abuse is easy accessibility and availability of these substances.

Substance abuse leads to addiction which is a compulsion of misuse to get a reward of feeling high. Being an action, which is rewarding to the mind and body this compulsion is very hard to stop on their own. They need support from family, friends and professionals to help them overcome this addiction.

In Tanzania, there are a number of sober houses and few rehabilitation centers which provide treatment and consultation to substance abusers and families. These centers provide accommodation, treatment and therapy for a period of time where they abscond the use of these substances, get detoxified and go through therapy and teachings for overcoming their addiction.

Once a person is ready and strong to be discharged, they are followed up with a follow up program which enables and ensures that the person has enough support when they get the compulsion to use again.

Relapse is a common phenomenon among substance abusers. This is when a person trying to stop using drugs can make mistakes, feel bad and start using again. At this point is when the person needs the support from family, friends and fellows to help prevent a relapse or stop after a relapse.

A lot of people gradually increase the quantity of the choice of drug after which the reward does not satisfy them leading them to add multiple drugs or over dose on a drug. Mixing of these drugs or overdosing to levels that can be lethal of detrimental to one's health and function.

All substances that are addictive have harmful effects on our body, mind and soul. The effect on our vital organs physically and physiologically. It affects brain function resulting in long term psychological effects, memory and concentration.



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The Awaited Rehab Centre opened in March 2020, it is a home for people who want to overcome their addiction and lead a normal fruitful life. We deal with substance abuse such as alcohol, cannabis, heroin, tobacco chewing and Pharmaceutical drugs.

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If you know someone who needs help or more information, please contact us on the above given contact.

ORAL HYGIENE IN PREGNANCY

By Dr. Sakina Nagri-Haji

Dental health (also called oral health) is the health of your mouth, teeth and gums. It's an important part of your overall health, and if you're pregnant, it's an important part of your prenatal care (medical care you get during pregnancy).

Pregnancy can increase your risk for oral health problems, and these problems can affect your pregnancy. For example, some studies show a link between gum disease and premature birth. Premature birth is birth that is initiated early. Premature babies may have more health problems at birth and later in life than normal babies.

Taking good care of your mouth, teeth and gums during pregnancy can help you have a healthy pregnancy and a thus a healthy baby.

Right now you're probably wondering how the problems in your mouth can have an effect to your foetus. Here's what happens; The Changes in your body during pregnancy can affect your teeth and gums such as during pregnancy:

- You have increased levels of certain hormones, like Progesterone and Oestrogen, in your body and these can increase your risk for certain oral health problems.
- Your eating habits may change. You may eat more of certain foods during pregnancy than you did before you were pregnant. The kinds of food you eat can affect your dental health, such as more cravings for sweet food increases the chances of having caries
- You may brush and floss your teeth less than you did before you got pregnant. This is because your gums are tender or you're more tired than usual. Also, for some women, brushing and flossing may cause nausea (feeling sick to your stomach).

The changes that happen in your body (mentioned above) may lead to the following problems:

- Cavities (also called tooth decay or caries). These are small, damaged areas in the surface of your teeth. Being pregnant makes you more susceptible to cavities as you may crave for more sugary foods. You can pass the bacteria that causes cavities to your baby during pregnancy and after birth. This can cause problems for your baby's teeth later in life.
- Periodontal disease (also called periodontitis or gum disease). If gingivitis is untreated, it can lead to periodontal disease. This causes serious infection in the gums and problems with the bones that support the teeth. Your teeth may get loose, and they may have to be removed.
- Gingivitis. This is an inflammation (redness and

swelling) of the gums which happens mostly when you don't brush regularly. If untreated, it can lead to more serious gum disease, 60- 75% of pregnant women have gingivitis. Signs and symptoms include:

- » Redness and swelling
- » Tenderness in the gums
- » Bleeding of the gums, even when you brush your teeth gently
- » Shiny gums
- Tooth erosion. If you are a victim of morning sickness and thus vomit regularly, your teeth may be exposed to too much stomach acid. This acid can harm the enamel (the hard surface) of your teeth making your teeth more susceptible to caries and sensitivity. Morning sickness is nausea and vomiting that happens during pregnancy, usually in the first few months.

Signs and symptoms of dental problems include:

- Bad breath
- Loose teeth
- Mouth sores or lumps on the gums
- New spaces between your teeth
- Receding gums (when your gums pull away from your teeth so you can see roots of your teeth) or pus along your gumline (where your gums meet your teeth)
- Gums that are red, swollen, tender or shiny; gums that bleed easily
- Toothache or other pain

If you have pain or swelling, call your dentist right away. If you have an infection, you need quick treatment to help prevent problems for your baby.

Here's how you can help keep your teeth and gums healthy:

- Brush your teeth with fluoride toothpaste twice a day and floss once a day. Use a toothbrush with soft bristles. Regular brushing and flossing can remove plaque and help keep your teeth and gums healthy.
- Visit your dentist for a regular dental checkup every 6 months (twice a year), even during pregnancy. At your checkup, tell your dentist that you're pregnant.
- Eat healthy foods and limit sweets. Healthy foods include fruits and vegetables, lean meat, whole-grain breads and pasta and low-fat dairy products. Limit sweets and sugary foods and drink water instead of sugary drinks. Eating healthy foods helps give you and your growing baby important nutrients. Your baby's teeth start developing between 3 and 6 months of pregnancy. Nutrients like calcium, protein, phosphorus, and vitamins A, C and D, help your baby's teeth grow healthy.

RADIOLOGY: THE EYES TO MEDICINE

By Mehdiya Salim Manji

Radiology is a branch of medicine that uses different kinds of radiation (rays) to diagnose and sometimes even treat diseases. There are various modalities of investigations including Ultrasound, Plain X-Rays, CT – Computed Tomography and MRI – Magnetic Resonance Imaging among others.

Radiology plays a vital role in producing images of internal organs which can otherwise not be seen clinically. A radiologist is a medical doctor who is specialized in diagnosing and treating diseases using medical imaging.

Ultrasound is the cheapest and the most harmless of the modalities. The Ultrasound uses sound energy to produce images and is particularly useful in children and pregnant women. It is affordable and relatively fast and safe.

Plain X-rays is a common investigation and usually the first line. It uses X-rays which is a type of radiation. The images appear in black and white depending on the absorption of different parts of the body - different tissues absorb the X-rays differently, hence the image, for example bones appear white because most of the rays are absorbed by calcium in the bones while air absorbs the least and so the lungs look black.

CT actually represents the workhorse of the Radiology department. CT Scan uses X-rays in a combination series at different angles to bring about 2D and 3D images of the body. The CT scan images are very detailed and help in diagnosis and treatment planning especially in Cancer patients. The CT scans are usually performed fast within few minutes, about 5, hence the advantage and less claustrophobia in the patient. However the dose of X-ray is much higher in CT than in the plain X-Ray making it the disadvantage of the CT Scan – High radiation dose!

MRI is one of the recent medical inventions. It uses magnetic radiation to create detailed images of the body. It actually utilizes the body's hydrogen atoms which are in abundance due to the fact that our bodies are 60-70% water. Sophisticated programming enables 2d or 3d images to be generated. The advantage of MR Imaging is that no radiation is involved, however it is time consuming and can be difficult for the patient especially those who have fear of staying in closed places for long time.

Like the eyes of our bodies, Radiology is the eyes to Medicine helping in guiding to an appropriate diagnosis for further assessment and treatment. The radiology team including Radiographers play a vital role in the healthcare system – their pictures are worth a 1000 words, they've got great image-inations, they get the inside story and without them – it's all guesswork!



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OBESITY AND WEIGHT LOSS

By Dr. Ali Khatau



I'm currently in the 10th month of my yearlong internship program and I am currently rotating at the family medicine department at the Agakhan hospital. This department involves primary care, treating basic conditions like malaria and UTI's as well as complicated cases and admitting patients where necessary. About 2 weeks ago, a 55-year-old obese patient visited the clinic complaining of feeling very thirsty along with constant fatigue(tiredness). She was a hypertensive patient for 2 years and in this period, she never screened for diabetes. After doing a diabetes screening, we diagnosed her with type 2 diabetes. The only risk factor we established for her conditions (diabetes and hypertension) apart from her age were obesity caused by unhealthy diet and lack of regular exercise. She had no family history of diabetes nor hypertension and did not smoke or use alcohol. This shows how a poor diet and an inactive lifestyle can lead to chronic illnesses over the long term.

Obesity and overweight are the conditions whereby a person has excess body fat which is resulted from consumption of extra calories. The World Health Organization (WHO) reports that worldwide obesity rates have tripled since 1975, and in 2016, more than 1.9 billion adults (18 years and older) were overweight and of these over 650 million were obese. WHO also reports that in 2016, 39% of adults aged 18+ were overweight from which 13% were obese.

How would you determine if someone is overweight or obese?

The Body mass index (BMI) is a simple measurement of weight-for-height that is commonly used to classify

overweight and obesity in adults. It is defined as a person's weight in kilograms divided by the square of his height in meters (kg/m^2).

$$\text{BMI} = \text{Weight (Kg)} / \text{Height}^2(\text{m})$$

A normal healthy BMI range is between 18.5 to 24.9 kg/m^2 . A person is labelled overweight when he's BMI is greater than or equal to 25 and he is obese when he's BMI is greater than or equal to 30.

What causes obesity and overweight?

The basic cause of obesity and overweight is an energy imbalance between calories consumed and calories used. Lately, there has been an increased intake of energy-dense foods which are high in fat and sugars and an increase in physical inactivity due to the increasingly sedentary nature of many forms of work, changing modes of transportation, and increasing urbanization. But it's not always just about calories in and calories out, or having a sedentary lifestyle. There are also other causes that cannot be controlled which include:

- Genetics, which can affect how your body processes food into energy and how fat is stored.
- Growing older, which can lead to less muscle mass and a slower metabolic rate, making it easier to gain weight.
- Not sleeping enough, which can lead to hormonal changes that make you feel hungrier and crave certain high-calorie foods.
- Pregnancy, as weight gained during pregnancy may be difficult to lose and might eventually lead to obesity.



Certain health conditions can also lead to weight gain, which may lead to obesity. These include:

- Polycystic ovary syndrome (PCOS), a condition that causes an imbalance of female reproductive hormones.
- Cushing syndrome, a condition caused by having high cortisol levels (the stress hormone) in your system which makes you eat more.
- Hypothyroidism (underactive thyroid), a condition in which the thyroid gland doesn't produce enough of certain important hormones.
- Osteoarthritis (OA) and other conditions that cause pain that may lead to reduced activity.

What are common health consequences of overweight and obesity?

Raised BMI is a major risk factor for Non-Communicable Diseases (NCD's) such as:

- Cardiovascular diseases (mainly heart disease and stroke), which were the leading cause of death in 2012
- Diabetes and hypertension
- Musculoskeletal disorders (especially osteoarthritis – a highly disabling degenerative disease of the joints);
- Some cancers (including endometrial, breast, ovarian, prostate, liver, gallbladder, kidney, and colon).

How can overweight and obesity be reduced?

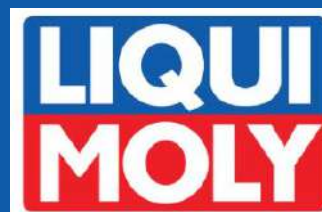
Overweight and obesity, as well as their related noncommunicable diseases, are largely preventable. Supportive environments and communities are fundamental in shaping people's choices, by making the choice of healthier foods and regular physical activity the easiest choice of preventing overweight and obesity.

The most effective weight loss tips include:

- Have a healthy balanced diet and limit energy intake from total fats and sugars, increase consumption of fruit and vegetables, as well as legumes, whole grains and nuts.
- Engage in regular physical activity (60 minutes a day for children and 150 minutes spread through the week for adults).
- Avoid smoking and regular alcohol consumption.

Conclusively, many of us do not put much efforts in maintaining a healthy weight. While it might not really do as much damage during our youth, as we approach old age, it ends up causing many unnecessary complications some of which require lifelong treatment. It is sad to see such a high number of diabetes and hypertension cases in Tanzania which lead to pain, lower quality of life and financial problems caused by modifiable risk factors such as being overweight.

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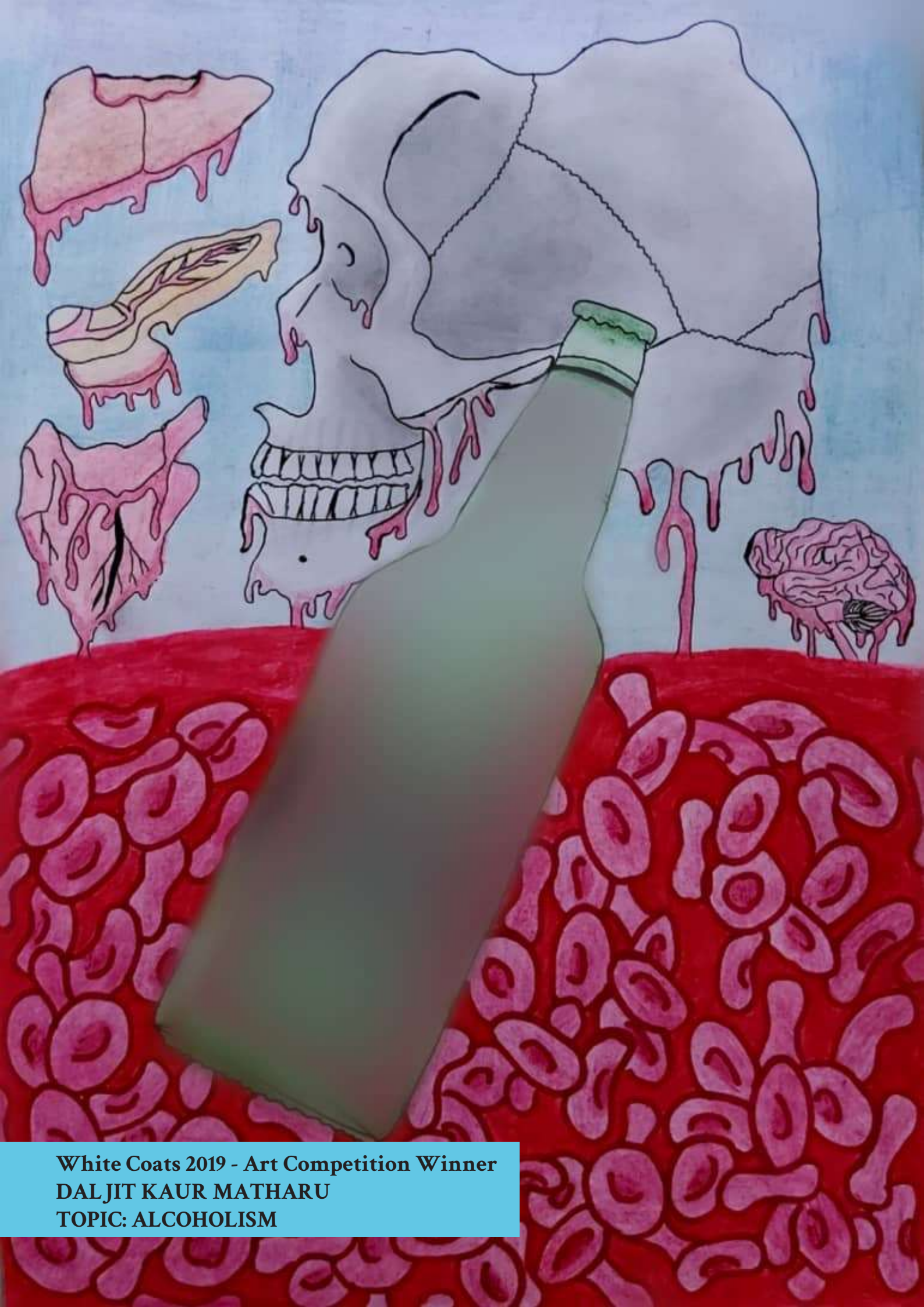
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TOPIC: ALCOHOLISM

UNDERSTANDING YOUR MENTAL HEALTH

By Shabbir Khalfan

Mental health is defined as a state of wellbeing in which every individual realizes his or her own potential, can cope with the normal stresses of life and is able to make contribution to her or his community. (WHO, 2005)

Untreated a mental health condition may cause major changes in persons thinking, emotional state and behavior.

People experiencing mental health conditions face insurmountable difficulties and problems which can exacerbate their illness. although this might be partly due to nature of such conditions, however it is made worst by low level of support, understanding and acceptance of mental health conditions in the society.

Apart from the impact on individual's life, family, community and society at large also bears the cost of mental health conditions, physically, socially and economically. Additional hardships are caused by attitudes of rejection and stigma towards people with mental health conditions.

We have to realize that people of all ages can experience poor mental health condition.

Common Mental Health Conditions

Anxiety Disorders: We all experience anxiety at some time as it's natural response useful to avoid dangerous situations and motivating us to solve everyday problems. However, it becomes disorder when it is more severe, long lasting and interferes with persons work and relationships.

Depression: We all feel sad or "Blue" when bad things happen, this is not depression it's just depression mood in which people cope and manage to recover without treatment. Clinical Depression is the one which lasts at least two weeks or more, interferes with person's ability to work and have satisfying relationship, affect person's behavior and has physical emotional and cognitive effects.

Psychosis (Schizophrenia, Bipolar): Is a general term used to describe changes in thinking, perception, mood and behavior that, can severely disrupt the individuals' life. It is crucial to highlight that in some societies such experiences are understood as spiritual, positive and acceptable.

It is important to note that mental health conditions are not same as Neurological or Developmental disorders. Mental health conditions are more common than cancer, diabetes or heart disease. 1 in 4 people



has mental health condition- Mental Health First Aid England.

It is crucial to note that the earlier the intervention the greater the chances of recovery. Recovery Methods:

- Counselling
- Therapies such as Psychotherapy (eg. Cognitive behavioral therapy)
- Professional Help (Medications)

Coping Mechanisms that might be helpful:

- Giving: Do things for others
- Relating: Connect with people
- Exercising: Live life mindfully
- Trying out: Keep learning new things
- Direction: Have goals to look forward to
- Resilience: Find ways to bounce back
- Emotions: Look for what's good
- Acceptance: Be comfortable with who you are
- Meaning: Be part of something bigger

It is high time we break the silence and fight stigma around mental health and unite to accept and support people going through tough decision of faking their wellbeing while they not, simply due to fear of being judged.

There is no health without mental health!!

CAREER PROFILES



Dr. Saqalain S. Kassamali
MD, MMed Oph

Who is an ophthalmologist?

An ophthalmologist is a medical doctor who has specialized in managing and treating diseases of the eye either surgically or medically. This involves studying in medical school for five years first, doing a year of internship to graduate as a medical doctor and thereafter specializing in the eye for another four years. That's a minimum of 10 years of studying to become an ophthalmologist.

An ophthalmologist usually works hand in hand with an optometrist and an optician to optimally manage a patient. An optometrist in the modern sense is a healthcare professional who has studied for four years and acquired a degree in optometry and assists in diagnosing and managing vision changes whereas an optician is a technician who designs, verifies and fits spectacles and lenses to correct eyesight.

An ophthalmologist needs special equipment including a slit lamp and a variety of lenses to examine the front, middle and back of the eye. In terms of management, investigations are very specialized. Technology in optics and imaging systems is commonly advancing so as to clearly view structures of the eye clearly and at high magnification.

Both surgery and medicine may be involved in treatment of the disease. The diagnostic and therapeutic skills of the physician as well as the dexterity of the microsurgeon are all called upon. Lasers are used in treating the retina as in diabetic retinopathy as well as specialized lasers to correct refractive errors as in the treatment of myopia.

Ophthalmology also offers relatively quiet on-call nights, less times in the wards, more clinic and theatre-based work, unique research opportunities, and an incredible amount of patient satisfaction.



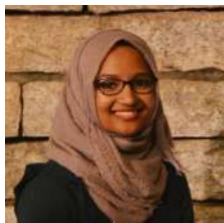
Ali Fayaz Jaffer
Clinical Audiologist

Being an audiologist usually means you have the pleasure of being asked “What’s that?” every time you tell someone what you do for a living. To put it quite simply, audiology is all about the ears. From testing how well the ear is working to fitting hearing aids to help a person hear, a large portion of audiology is concerned with the diagnosis and rehabilitation of hearing loss. In a typical week we see people of all ages; in a day one could see a child needing hearing assistance to develop speech appropriately, and an elderly person wanting to hear their grandkids again.

Along with this, audiologists can undergo further training to develop their skills and practice in a variety of areas. One such field is of vestibular audiology, which is concerned with testing, diagnosing, and managing issues related to vertigo and imbalance that may be caused by a problem within the inner ear’s balance system. Another is the field of cochlear implantation – while a cochlear implant surgeon performs the surgery, an audiologist is responsible for ensuring the implant is set correctly and is effective in restoring a person’s hearing. Some audiologists choose to delve further into paediatrics, working exclusively with infants and children with hearing disorders.

Being passionate about helping people and being interested in the medical field, I came across audiology when looking into options for university while I was still in high school. I was drawn to the profession when I saw the difference hearing made to people – like many, I did not know much about hearing loss or hearing aids before going into the field. It’s hard to think of what we would do without our hearing, and it was with the knowledge that something could be done to help people who struggled with hearing impairments that I decided to pursue this niche career. Five years after beginning my bachelor’s, I can happily say I made the right choice – and love doing what I do every day.

For students pursuing audiology at university, my best advice would be to stay on top of the latest research, technology, and practice. The field and the technology we use (hearing aids, cochlear implants, diagnostic machines) is rapidly evolving; your lecturers and your patients will definitely appreciate you keeping up with these. Along with that, maintain your passion for helping people – at the end of the day, that’s what we’re here for!



Sayyeda Ismail
BSc. Medical Imaging Technology

When we speak of medical imaging what is the first thing that pops up in our mind - A huge scary machine? X-rays? Radiation? Hospitals? At some point in our lives we've all heard, seen or underwent some kind of examination or procedure using either of these imaging modalities (X-ray, Ultrasound scan, CT scan, MRI scan, Mammography etc).

We have all benefited from medical imaging, either by undergoing a simple chest X-ray for a cough, a bone X-ray for a fracture, Obstetrics ultrasound for antenatal screening or something more complex like a CT/MRI for further diagnosis.

Medical imaging has revolutionized the health care industry. It allows physicians to identify diseases much earlier and results show significant improvement in patient outcomes. Imaging also has a function in preventive care - recommended evaluations such as mammography and sonography can help detect early signs of breast cancer. An increase in the use of mammograms has been suggested to account for a 30% decrease in breast cancer deaths since 1990. Therefore, medical imaging can be life-saving as it enables doctors to assist with diagnostics, treatment and prevention!

Having taken this career path, I feel fortunate to be part of a department that is known to be the "EYE" of medicine. Being able to see exactly what the inside of the human body looks like, observing how it functions and its absolute perfection - that is by Allah, the best of the creators. Hence, as my article first stated - An "inside" look at excellence.

"Then we made the life-germ a clot, then we made the clot a lump off flesh, then we made (in) the lump of flesh bones then we clothed the bones with flesh, then we caused it to grow into another creation, so blessed be Allah, the best of the creators." (Holy Qur'an 23:14)

The major concern I've faced from those who have asked about my career is the issue of radiation. Questions such as; Is it safe? What are the risks of cancer working around this field? Why did you take up such a challenging career? Is it worth it? I'd like to quote the national institute of health in regards to diagnostic radiation, "radiation can be used for great benefit to humanity and with minimal risk, a risk comparable to or lower than those commonly accepted as an ordinary

part of daily life, such as driving to work."

For the past 20 years, manufacturers are trying their best to bring innovations to have reduced radiation dose as much as possible. Multiple radiation safety boards work together to ensure safety for all the patients, the people working in the radiology department as well as the general public. Development and implementation of various radiation protection apparel and accessories stand as the answer for the same. With these inventions, the exposure to radiation is effectively managed and minimized. So, yes it's safe and totally worth it!

Lastly, for anyone who is interested in this career and would like to clarify their doubts or put forward any questions regarding the same- please feel free to contact me through the MHI white coats team. I'd be more than happy to assist.

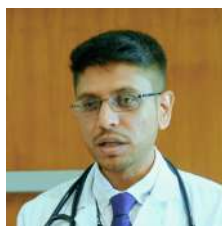


Dr. Shahista Jaffer-Amirali
MD, Msc. Clin Epi

I am a Medical Doctor by profession and further pursued my master of science degree in clinical epidemiology. Clinical epidemiology is a fairly unknown specialty. This is the science of applying the best available research evidence to enhance clinical decision making for improving individual patient health outcomes. It is an extensive course that has equipped me with skills that contribute to providing evidence-based patient care via conducting research and critically appraising available research information.

Over the last few decades, patient care has evolved and is more inclined towards evidence-based practice. I also followed suit in becoming part of this ever-growing evidence-based medicine community. After taking this course I discovered that my interest lies in conducting research especially systematic reviews, the highest form of evidence obtained through research. Assisting with clinical trials is another field of interest. This course has fulfilled its role by providing me with essential skills and made me realize that research is the epitome of clinical practice and is ever-evolving. It is ideal for women who wish to continue with a rewarding career as well as engage in family life. I would like to advise aspiring students to pursue this as a career and bring about change to improve current clinical practice by using the methods described above.

STUDENT PROFILES



Dr. Faisal Hooda,
MD, Resident - Internal Medicine

Internal medicine physicians (also known as “Internists” or more simply as “Physicians” in the Commonwealth nations) possess a vast array of skills, knowledge and diagnostic capability to be able to do what they do best. Internal medicine is a field of medicine that deals with the care, treatment and diagnosis of diseases and conditions in adults.

Internal medicine forms arguably the very ‘core’ of medicine: a terrain that comprises wellness and all non-surgical diseases of adults. This includes those involving ‘internal organs’ of the body - the heart, the lungs, the liver and gastro-intestinal tract, the kidneys and urinary tract, the brain, spinal column, nerves, muscles and joints.

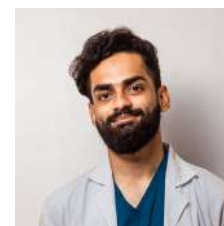
Some (non-Internist) critics often view this field as internal ‘madness’ due to the sheer amount of information and know-how this field requires. Internal medicine glues all the essential specialties in medicine from which other sub- and super- specialties stem forth. My pursuits in this intriguing field pertain to exploring the intricacies of how the body works and appreciating, in awe, how the “entire universe” is “enfolded in [every single] human body.”

In Tanzania Internal Medicine is in its developmental stages but on a very promising trajectory. There is still a considerable lack of physicians throughout the country and the region at large. The few that are present in the country practice in the major urban areas and in private centers.

With regards to training; a good number of local institutes of higher learning - namely the AgaKhan University, the Catholic University of Health and Allied Sciences Bugando, the Hubert Kairuki Memorial University, the Kilimanjaro Christian Medical College, the Muhimbili University of Health and Allied Sciences, and the University of Dodoma - all offer postgraduate residency (Masters of Medicine, MMed) courses in Internal Medicine that range from 3-4 years.

All-in-all, I highly encourage and strongly recommend prospective medical students as well as all other interested individuals to look into a career in the incredible and mind-boggling world of Internal Medicine!

Syed Orujul Hassan
Final Year Medical Student



“And whoever saves one life - it is as if he had saved mankind entirely.” Quran 5:32

This ayah is what made me start and is what keeps me going. Having graduated from high school with a major in physics, chemistry and biology, I only had one career in mind - MEDICINE. Fast forward four years later, I am still in love with this field. Medicine is all about giving back. One can make a real difference in someone’s life by alleviating pain and suffering. For people who love challenges, you will face all kinds of practical and intellectual challenges.

Awaiting to start my final undergraduate year, my experience at Muhimbili university has been great. The best years for me have been the clinical years (3rd and 4th year). This is where I’ve gained a lot of clinical experience and hands-on practice. I observed and assisted various surgeries, performed several procedures, deliveries and the list goes on and on.

I decided to study in Tanzania due to a multitude of reasons including but not limited to; a simple application process, early hands-on clinical experience and cheaper education (in comparison to other countries) as well as staying closer to my family.

For the upcoming students, I would say, “Follow what your heart wants”. Medical schools do not want someone who just gets good grades. They know that good grades aren’t the only things needed to make a good doctor in the long run. Have a passion and understand how that passion will help you become a good doctor. In the end, I emphasize that medicine is all about making a difference in someone’s life. It has a satisfaction of its own kind.





Tatheer Shabbir Sachedina
Final Year Dental Student

"I am overtly passionate about dentistry and looking forward to being a dental surgeon," said very few people or nobody at all. This statement carries a lot of weight and significance on its own. Many people look at dentistry as something inferior and less important to the medical fraternity. They feel a dentist is less of a doctor. This is an extremely wrong ideology. We fail to understand that both medicine and dentistry are important in their own way.

Dentistry is an excellent field of study in the sense that it allows you to have a good balance between your work and personal life. Moreover, it brings back the lost confidence and self-esteem in people by giving them the bright smile they have always desired.

Dentistry also has great areas of specialization, which include oral and maxillofacial surgery, restorative dentistry, pediatric dentistry as well as community dentistry. Recently, MUHAS has also introduced masters in orthodontics.

In Tanzania, dentistry as a course is only available at Muhimbili University of Health and Allied Sciences (MUHAS). I feel extremely proud and blessed to be a part of it. It provides the best quality of education and has highly qualified members of the academic staff to train us. Recently, MUHAS was ranked as the first university nationwide on the basis of its academic performance. I suggest studying in Tanzania is better since we get to practice on patients right from the third year when we are introduced to our clinical rotations. This enables us to get hands-on practice from a very early stage. Furthermore, I would say why search for "gold" elsewhere while it is present in your home country.

In a nutshell, I would like to take this opportunity to advise the younger generation to focus on what they love the most. Also, try to attain the best grades possible and leave the rest upon Allah (SWT) as He is the best planner. The good news is that with increasing awareness, more people are getting to understand the value and significance of dentistry. This is a positive change we are looking forward to. We are here to make the world a better place, one smile at a time.



Dr. Fatema Mohamed Versi
MD, Resident - Obstetrics and
Gynecology

Everyone is inspiring to someone and with this short article I hope I am able to inspire our girls to consider this field as a part of their career.

Obstetrics and gynecology is a medical/surgical specialty concerned with the care of women from pregnancy until after delivery. It also deals with the diagnosis and treatment of disorders of the female reproductive tract.

Medicine has always been my area of interest. However, the choice of this specialty developed over time. It was later strongly influenced by prior work experience in this specialty as an undergraduate and a junior doctor. It is a field that combines the roles of a physician and surgeon. It is among those that will never go out of demand. A specialty that half the population regardless of their background, age and prior medical history may at some point have to consult.

The demand for gynecologists in Tanzania is high with the increase in population size. One can get a vast exposure in the field due to many relatable diseases in the country. Why then lose the chance to serve our own people?

My advice to our young girls considering this field would be to volunteer and shadow senior doctors to get an idea and at least some exposure. One must be very active, have good communication skills and the ability to adapt in situations of emergency and stress due to the variable nature of the profession.



EFFECTS OF "SCREENS" ON CHILDREN

By Abbasaley M. Abbas

Today's era is referred to as the "smartphone era", all humans especially children are increasingly spending time in front of "screens" of various devices and gadgets. Sometimes parents resort to these devices to keep their children busy.

This is increasingly concerning; as in childhood brain connections form at an unrepeated speed, giving shape and depth to a child's cognitive, emotional and social development – influencing their capacity to learn, to solve problems, and to relate to others.

The effects can be brought about by the "content" itself, as well as the "habit". Several studies indicate and I'm sure pediatricians (medical practitioners specializing in children and their diseases) would agree, that because of the growth process what a child 'sees' becomes part of his/her growth and has a profound effect on the behavior of the child. There has been an increase in children and adolescents adopting violent behavior which is not a coincidence keeping in mind the number of violent games and content produced in recent years.

It is therefore very important to regulate what a child has access to through their devices, however it is not sufficient; as children are getting "addicted" to their screens! According to a study "The average 8 to 10-year-old spends nearly eight hours a day with a variety of different media, and older children and teenagers spend more than 11 hours per day." This addiction like any other comes at a cost and brings about several effects in child, we are all aware of the eye problems but let's go through some more:

Abnormal sleep cycles: Light plays a huge role in

hormone release responsible for our sleep, higher levels of screen time cause shortened and abnormal sleep patterns, which in turn comes with more negative effects like a lowered immune system. Sleep is essential for growth and good emotional well being, therefore vital for children to have a good enough sleep.

Changes in appetite: Prolonged screen time can cause decreased appetite and can also lead to poor food choices. Worldwide childhood obesity is on the rise and one of the causes being increased inactivity due to increased screen time.

Behavioural changes: Apart from the content, the children become addicted to their devices, this is due to release of pleasure hormones - as a result children become agitated and angry when their devices are taken away from them.

Children lose interest in other activities, and the devices become their "mood booster", this says a lot about the child's dependency on screens.

Cognitive effects: Higher daily screen time is associated with lower cognition in children, children perform poorly when it comes to academics. Children become increasingly dependent and are discouraged by critical thinking activities.

Screens are everywhere and completely ignoring them is not possible, however what we should do is regulate, not only the content but also the amount of time spent in front of the screens. There is no doubt that prolonged screen time significantly affects the health of our children!



FROM ONE WORKAHOLIC TO ANOTHER

By Nayaab-Zahra Zulfikar Parmar



Tell me if this sounds familiar: you've often fallen for the misconception that more work means you're being productive. You measure your worth by how much you get done. Now you're feeling the crushing weight of time pressing against you: meaning that you have to figure out how to be more efficient. You therefore begin to multitask, under the popular assumption that you can hit a couple birds with one stone if you just work on all of them together. But here's the kicker: your brain is not built to handle multiple tabs. Don't mistake it for your computer.

Even if you do end up with a sense of accomplishment from multitasking, it comes with a price. Whether you're doing multiple things simultaneously (talking on the phone while driving) or alternating between tasks (frequently picking up your phone while working on a paper), you're constantly interrupting and preventing yourself from being 'in the zone.'

Interestingly, while people admit to the increased stress that comes hand in hand with multitasking, we're less likely to recognize that it decreases efficiency. You're likely to make more errors and take longer to complete them compared to if you weren't doing all that juggling. A 1927 study with a focus on 'mental shifting' asked participants to alternate between adding six and subtracting three to a 2-digit number: they took 34% longer to complete each task. It also takes longer to react to changes in your environment, such as if someone is speaking to you while you're checking your WhatsApp. Your mind needs to stop thinking about task X before it can give you the focus you need for task Y. Thus, you take a while to grasp that someone just said something to you, and respond to them a

beat later than you're supposed to. This could hurt relationships, as well as your social skills. Other long term drawbacks are forgetfulness/absentmindedness, difficulty concentrating and a loss of creativity.

As a result of all this, we're more prone to experiencing anxiety, decreased productivity and continued exhaustion- in the form of 'burnout'. A psychologist would be of great help in overcoming this. In this epidemic of distractions, understanding cognitive function to acknowledge the harms of multitasking is only one example of the role that psychologists and psychiatrists play in the communities they serve. We can use their insight about how the mind works, about how people work, in order to improve our own lifestyles and work settings. It would also be advantageous to have more research psychologists on board to build our understanding of cognitive function in the real world.

Tip: I want to acknowledge here that multitasking is often unavoidable. If you do have to multitask, the best way to deal with it is by being mindful. Control where you divert your mind and attempt to reduce the load you place on it. Use checklists, minimize interruptions and apply stress reduction techniques (breathing exercises and meditation). Most importantly, create an environment that supports deep work. There are less cons to doing so when the tasks require different senses, ie. visual vs auditory. I personally find it more enjoyable to listen to podcasts/lectures while working on a fresh sudoku puzzle. Don't try this in class! Recall that the same hazards to multitasking apply, just to a lesser degree. This is indicated by the higher likelihood of a car accident when the driver is on a phone call. Despite the different sensory modalities, it still poses a risk- so be careful where you apply this.

MEDICAL MYTHS VS REALITY

Myth: Drink at least eight glasses of water per day.

Reality: There's no evidence that you have to drink that much water to assure adequate fluid intake and drinking too much of water can be unhealthy.

Myth: Reading in dim light ruins your eyesight.

Reality: Dim light isn't great for focusing, but it's "unlikely to cause a permanent change in the function or structure of the eyes.

Myth: Shaving causes hair to grow back faster or coarser.

Reality: Shaving does not affect the thickness or rate of hair regrowth, But shaved hair doesn't have the fine taper of unshaved hair, making it seem coarser.

Myth: Supplements always make you healthier.

Reality: Vitamin supplements may be not only ineffectual but even dangerous, studies have shown. For example, a study showed that some older women who take calcium supplements may face an increased risk of dementia (an impairment in the normal functioning of the body) And in a huge review of 20 years of supplement research researchers found that taking high doses of vitamins may be linked with an increased risk of cancer.

Myth: Cold weather makes you sick

Reality: This myth is common around the world, but it is just not true, studies have shown we may feel more cold symptoms — real or imaginary — when we are

chilled (after all, a cold is called a "cold" for a reason), but the temperature itself does not make us more susceptible to viruses.

Myth: Sugar turns kids into little monsters.

Reality: It can be hard to find a parent who does not believe this, But it is in their heads! In one particularly clever study among a slew of studies finding sugar's nil effect on unruliness, kids were given Kool-Aid sweetened with aspartame, a compound that contains no sugar. Researchers told half of the parents the Kool-Aid contained sugar, and told the other half the truth. The parents in the study who thought their kids were riding a sugar high reported their children were uncontrollable and overactive. But a sensor on the kids' wrists that measured activity level said the opposite: The kids were actually acting subdued.

Myth: Chewing gum stays in your stomach for 7 years.

Reality: Although it is true that many of the ingredients in gum — such as elastomers, resins and waxes — are indigestible, that does not mean they hang out in your guts for seven years. Plenty of what you eat — even things you are recommended to eat, such as fiber — is indigestible. But the digestive system is a robust piece of organic machinery, and anything it can't absorb, it moves along. Despite the stickiness and strange consistency of gum, it passes right through your digestive tract and into the toilet.

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Design an eye catching logo for Mahdi Health Initiative and stand a chance to win TZS 100,000/-

- Logo should depict the nature of the organization i.e. community health awareness and promotion.
- Logo should be designed on a transparent background.
- Logo design file should be submitted as a PNG, JPEG or PDF. Winner will be asked to submit the raw file in AI format.
- Only original designs will be considered.

Deadline: 15th December 2020

**Submit entries to: core.mhi@gmail.com
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