



# UMT

School of Pharmacy

# NEWSLETTER

Volume I, Issue 4, October-December 2022



Editor in Chief: Prof Dr Ejaz Ullah Cheema

Editorial Board:

Sarah Rehman (Member) | Dr Rabia Altaf (member)



<http://www.facebook.com/sph.umt/>



<https://www.linkedin.com/school/umt-official/mycompany/>

# TABLE OF CONTENT

1. Message from Editor in chief
2. News in brief
3. School of Pharmacy Activities:
  - Visit to Remington Pharmaceuticals
  - Visit to Ghurki Hospital
  - Inter professional Education based workshop
  - Workshop on improving community pharmacy practice skills using virtual simulation tools
  - International Webinar on the topic "student to pharmacist: journey of a UK registered pharmacist"
  - Seminar on effective utilization of LRC resources and services
4. Continuous professional development (CPD)  
Faculty Development Workshop on Publishing in peer reviewed journals
5. Industry academia linkages:
  - MOU with Indus Hospital
  - MOU with Ghurki Hospital
6. Student corner:
  - Orientation ceremony of fall 2022 batch
  - First Anniversary Celebrations of School of Pharmacy
  - Student Reflections
7. Research Corner
  - Research Publications
8. Health corner
  - Prevention against smog and its associated illnesses





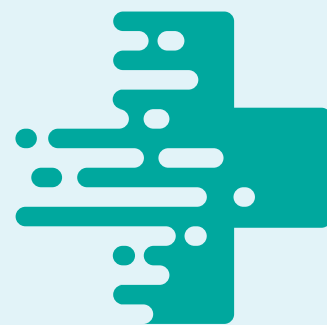
## Message from Editor in chief:

---

We are pleased to share the fourth issue of our school of Pharmacy quarterly newsletter. This newsletter serves as an opportunity to provide you with an insight into various activities conducted by the school between October and December last year including the signing of MOUs with two large hospitals, organisation of faculty and student development workshops and oath taking ceremony of new students. The student corner features a selection of students' reflections on their experience of UMT while the health corner includes an informative article on the preventative strategies against the ongoing smog. I would like to acknowledge the dedication and commitment of the two members of our editorial board Ms Sarah Rahman and Dr Rabia Altaf for putting this issue of newsletter together. I hope that this Newsletter would be of interest to you.



**Dr Ejaz Ullah Cheema**  
Professor and Founding Dean



## News in brief:

---

The UMT School of Pharmacy is pleased to announce the implementation of Outcome Based Education (OBE) for Pharm-D students to help them achieve the desired competencies and skills expected in future Pharmacists.



# School of Pharmacy Activities

## Visit to Remington Pharmaceuticals

The UMT school of Pharmacy faculty along with colleagues from school of Health Sciences and OCLP visited Remington Pharmaceutical industry with the aim to strengthen Academia Industry linkages. Remington Pharmaceuticals Pakistan is a specialist branded generics pharmaceutical company having a state

of the art cGMP compliant manufacturing facilities and manufacturing eye drops, tablets, capsules, syrups, dry suspensions, ointments, ear drops and Cephalosporins. The School of Pharmacy (SPH) looks forward to an active collaboration with Remington Pharmaceuticals in the areas of education and research.



## Visit to Ghurki Hospital

The students of SPH along with the faculty members visited Ghurki Hospital as a part of their learning journey. They were welcomed by a team of professionals in Ghurki Hospital including the chief

Pharmacist and other healthcare staff who took them to different sections of Hospital and showed them the Pharmacy services that are operational over there. It was a good learning experience for the students.





## Interprofessional Education based workshop

The UMT school of Pharmacy in collaboration with the school of health sciences organized an interprofessional education (IPE) based workshop titled "Osteoporosis/Osteopenia in relation to diagnosis and treatment. The workshop brought together students and faculty members from five health care disciplines including Pharmacy, Physiotherapy,

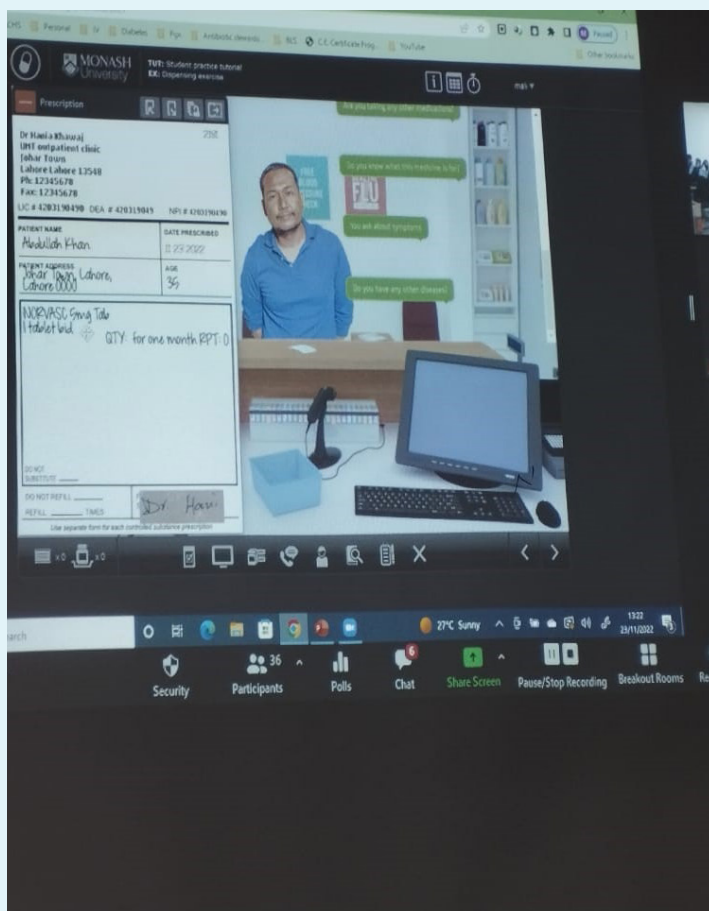
Nutrition, Medical imaging and Medical Lab sciences. The workshop was aimed to promote collaborative learning and make each other understand about their roles within multidisciplinary healthcare teams. IPE is not conducted routinely in Pakistan and needs to be promoted to ensure the delivery of patient-centered quality health care.



# Workshop on improving community pharmacy practice skills using virtual simulation tools

Simulation based teaching offers a practical and verbal alternative to pharmacy students to help them develop their pharmacy practice skills. The UMT school of pharmacy has introduced simulation-based teaching at the school using MyDispense (a virtual pharmacy tool) in order to provide the students a safe learning environment where they can learn and apply their basic skills in responding to complex, stressful and high-risk situations without the fear of making an error.

The School in collaboration with Giving back to Pharmacy in Pakistan (GBTPP) arranged a virtual workshop on improving pharmacy practice skills using virtual pharmacy tools. The workshop was conducted by Dean SPH Dr. Ejaz Cheema and Dr. Majid Ali from Cairo University Egypt who shared their insight on how virtual simulation tools can help pharmacy students and pharmacists improve their pharmacy practice skills.





## International Webinar on the topic “student to pharmacist: journey of a UK registered pharmacist”

UMT school of Pharmacy arranged an International webinar for SPH students and faculty members on the topic, Student to Pharmacist: journey of a UK registered Pharmacist. The speaker was Dr. Sarah Baig who is a registered pharmacist in UK and is serving as Pharmacy professional Development and Governance Lead, Dudley integrated Health and Care NHS trust, UK. Dr. Sarah gave an insight on the journey of Pharmacist in UK from graduation to registration as a pharmacist. She shared her personal experiences regarding her role in different pharmacy setups over the time. Dr Sarah elaborated on the challenges faced by the Pharmacy force in the UK during covid-19 period. The webinar was concluded with Question and Answer session. The Dean SPH thanked Dr Sarah for her valuable advice and encouraged the students to enhance their learning skills to serve the profession at both National and International levels

The poster is for an international webinar. At the top, it features the logos of the University of Management and Technology (UMT) and the School of Pharmacy. The title 'International Webinar' is in white on a dark blue background. Below it, the topic '"Student to Pharmacist: Journey of a UK registered Pharmacist"' is written in yellow and white. A white box contains the text 'Join via' followed by a Zoom logo and '2:00 PM, PST'. A circular inset on the left identifies the 'GUEST SPEAKER' as Sarah Baig, listing her qualifications: MPharm (Hons) MRPharmS, PgClinDip(Clin.Pharm) IPresc, MSc MFRPSI PGCert FHEA, and her role as Pharmacy Professional Development and Governance Lead at Dudley Integrated Health and Care NHS Trust, UK. To the right of the text is a photo of Dr. Sarah Baig. At the bottom, a yellow banner shows a calendar icon for 'TUESDAY, 29-NOV-22' and a location pin icon for 'SPH, SHS CAMPUS, UMT, RAIWIND ROAD, LAHORE.' A vertical text on the right side of the photo reads 'Your professional journey has begun'.

## Seminar on effective utilization of LRC resources and services

A seminar was organized by School of Pharmacy in collaboration with UMT learning resource center. The guest speaker was Mr. zaheer Ahmad, Chief Library officer/ Head Learning Resource center UMT. Mr. Zaheer guided the newly admitted Pharm-D students about various facilities offered by LRC. He focused on the importance of reading and elaborated the students about the effective utilization of LRC resources and services. The session was informative for the students and they thoroughly enjoyed it.



# Continuous professional development (CPD)

## Faculty Development Workshop on Publishing in peer reviewed journals

### FACULTY DEVELOPMENT WORKSHOP



#### "PUBLISHING IN PEER-REVIEWED JOURNALS"

-  • Friday, 9th- December-2022
-  • 2:00 PM To 3:30 PM
-  • 2S-05, SHS Campus, UMT, Raiwind road Lhr.

Guest Speaker

**Dr. Muhammad Abdul Hadi**

BPharm MClInPharm PhD PGCertHE  
FHEA FRSPH SRPharmS  
Associate Professor of Clinical  
Pharmacy and Practice  
Department of Clinical Pharmacy  
and Practice  
College of Pharmacy, QU Health,  
Qatar University



Faculty development is the key to foster the learning environment and enhance the academic performance of both students and faculty members. The UMT School of Pharmacy organized faculty development workshop titled "Publishing in peer-reviewed journals" by Guest Speaker Dr Muhammad Abdul Hadi, Associate Professor of clinical pharmacy and practice, college of Pharmacy, Qatar University. Dr

Abdul Hadi focused on the importance of publishing in peer reviewed journals. He Focused on the common mistakes while writing an article that may lead to rejection in publishing. The workshop was helpful for the attendees. The Dean SPH and faculty members thanked the guest speaker for delivery such an informative and interactive workshop

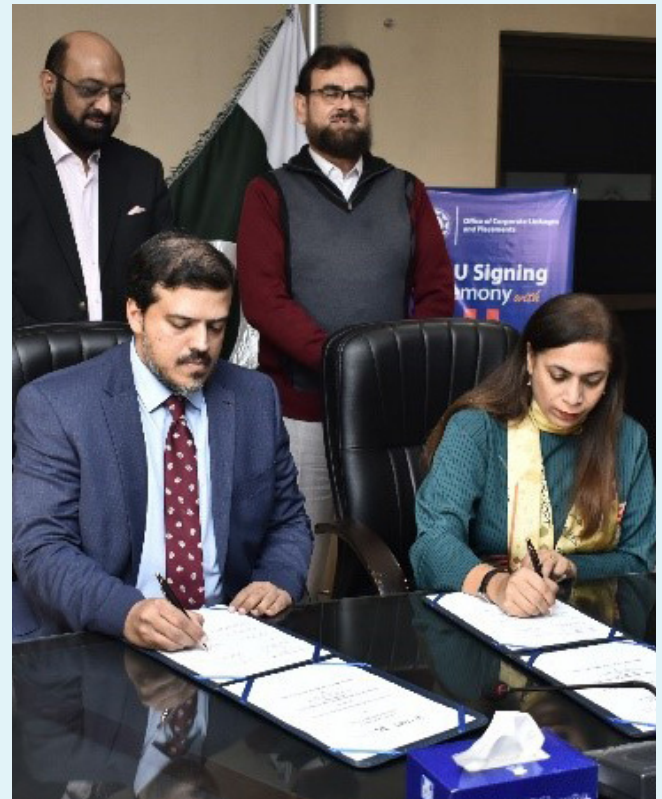


# Industry Academia Linkages:

## MoU with Indus Hospital

The University of Management and Technology and The Indus Hospital (IHNN) have signed an MoU for mutual collaboration. Indus Hospital and Health Network –IHNN is a Non-profit organization and is dedicated to provide state of the art healthcare services entirely free-of cost to the populace of the country through its countrywide network including 15 hospitals. Both joined hands to facilitate UMT and SPH students in various initiatives including:

- Industry-Academia Liaison
- Internship and placements for UMT students
- Impart clinical or Pharmacy training
- Health education sessions for students
- Indus yaqeen volunteer program for students
- Students ambassadorship for Road safety in collaboration with Total Parco







## MoU with Ghurki Hospital

UMT has signed an MoU with Ghurki Trust and Teaching Hospital. Ghurki Hospital is a tertiary care charitable hospital having a capacity of 600 beds and is one of the famous names in orthopedics. They acquired the latest state of the art Cyberknife technology which is Punjab's first and Pakistan's 2nd Robot and can treat any cancerous and non cancerous tumor.

Both joined hands to facilitate UMT students from SPH and health sciences and to provide services in UMT healthcare initiatives including :

- Internship and placements opportunities for students
- Clinical Pharmacy training
- Health education sessions for students
- Orientation visits for SPH and SHS students
- Faculty secondment program





# Student Corner:

## Orientation ceremony of fall 2022 batch

An orientation ceremony was conducted on 13th November, 2022 at SPH to welcome new students. Dean SPH Prof. Dr. Ejaz Ullah Cheema and faculty members of School of Pharmacy were present at this event. The Dean welcomed the new students and congratulated them on successful admission in UMT school of Pharmacy. The event was well organized by the Orientation leaders of UMT from SPH.



## First Anniversary Celebrations of School of Pharmacy

The UMT School of Pharmacy celebrated its first anniversary with the management, faculty members and students. The auspicious occasion served as an opportunity to highlight the achievements of the school during the first year. Furthermore the school sincerely acknowledged the hard work and commitment of its faculty and staff members together with the unwavering support of the president UMT Mr. Ibrahim Murad and Rector UMT Dr. Asif Raza throughout the year. The Dean SPH in his address to the students renewed his commitment that school of Pharmacy will continue to serve as a center of excellence in education and research. A cake was cut to celebrate the event and the Dean, faculty members and all the students of SPH cherished this memorable moment. The ceremony also included the award of medals and certificates to the SPH students who were nominated as the proud recipients of Dean's merit award. Another important part of the ceremony was the administration of oath from newly enrolled students in Pharm-D whereby they pledged to uphold the ethics and values of the Pharmacy profession.





# Student Reflections

## My First Semester's Experience at UMT

### Muhammad Humza

My university is an educational institution which is widely recognized nationally and internationally. UMT offers an ideal environment in classrooms to the students. It has fully equipped labs and IPC rooms. UMT has developed an astonishing online system for ease of students to access the lectures, upload assignments, making requests to management, attendance details, fee details and even an online library. The students also have student advisors to resolve all issues of any kind while keeping the students' details private.

I really love the qualified faculty and the standard of teaching being maintained at UMT. You can also get help from the professors after the class during the counselling hours. If you have any questions for the professor,

you could even email them, and they always respond to it. UMT and its faculty have made me challenge my former self and aim higher and dream bigger.

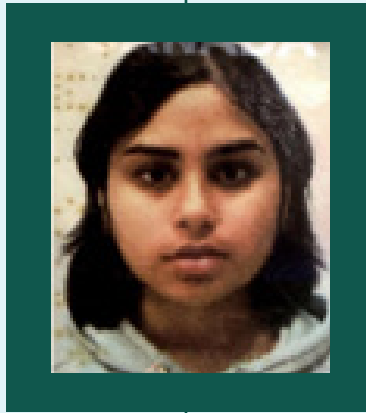
One of the most loveable aspects of UMT is the fact that the university puts an emphasis on developing a student's professional skills as it does on honing academic aptitude. This balance of studies and social activities is a remarkable experience for the students. It is a great opportunity for the students to develop skills that not only boost confidence and offer personality grooming but are also essential for becoming successful in their professional lives. Studying at UMT at the pharmacy department, I have realized how close I am to achieving my goal in life.





## Ayesha Zaheer

Walking through the gates of campus, I could feel my heart pound violently in my chest. After leaving behind my life in Canada and adapting to a new environment and unique range of people, my emotions were scattered. I felt anxiety creeping like an upcoming storm. People don't talk about the myriad of emotions that is felt when starting university in a foreign country. Walking those first few steps into this new place felt like the anticipation of a storm, the grays of every shade and depth clouding your every thought, I was unsure what to expect and had questions if I would settle in. I find hope in those cloudy skies, after every



storm comes the sort of sunshine that goes all the way to the soul, the sort that makes one glow a little brighter within. This storm was just the same, the strong wind-like gusts of university was overwhelming at first, yet after it was so glorious, alive with an excitement for what is to come in my future here. My heart no longer pounds in anticipation walking through these gates but instead I look forward to the familiarity on campus. We all pray for the calm weather, but it takes the best of us to welcome the oncoming storm and to thrive once it passes.

## Faiqua

WORLDS A STAGE, AND ALL THE MEN AND WOMEN MERELY PLAYERS." (Shakespeare) Following the completion of high school and college. To continue my education and elevate my future, I envisioned a fantastic school. I discovered the University of Management and Technology, Lahore, while looking for a fantastic university. Prior to entering the university's boundaries. I set a few objectives to imprint myself more deeply into study aesthetics. When I first encountered my gracious teachers and my accomplished seniors, I was positively giddy. As soon as I started engaging

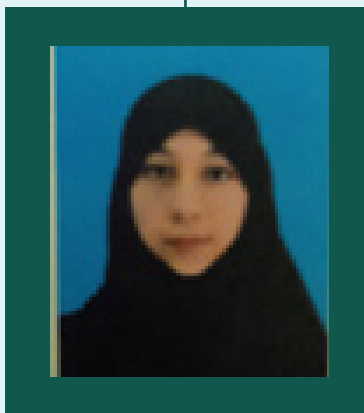


with my classmates, all of my worries vanished. I was transported to a different universe of made-up plays by the waxy seats and the crystal board. I was taken in by the resourceful and fully equipped library. Therefore, everything met my expectations. I was consequently happy and satisfied with it. I was grateful to have been accepted into the University of Management and Technology because we should always look for greater prospects, more opportunities, and dreams in order to deepen and strengthen our roots.

and

## Alishba Shahid

The word “university” changed its meaning for me as I ventured out into the real world without my parents’ companionship, and it grew to imply so much more than just a place to receive an education. Standing in front of UMT, with a heart with racing heartbeat and rising emotions, I envisioned it as a castle enclosing the adventurous journey I awaited to explore. It was beyond my imagination to find a path laid there for me to walk upon. Soon enough I took my first step on it, my calm demeanor hiding all the nervousness and before I knew it, I was walking and even running. Regardless of how fast my pace was or how slow my steps were, the light



was always in front of me, the shadow behind me and the wisdom at my sides. I found my teachers in these forms, appreciating my steps and relieving all my negative emotions; they held my hand like shining chandeliers in a lonely castle, they brightened my university experience. My experience can never be more rewarding than the commitment of my teachers to continue to be my guide for the coming five years and only let go of the finest version of myself to explore the lush greenery surrounding the castle.

## Aliza Fatima

Starting university is a big step in anyone’s life. It is a time to gain independence, make new friends, and learn about the world and yourself. My university experience has been the same. I remember the excitement and nerves I felt on the first day of orientation. However, those nerves quickly dispersed as I met more people and started to get involved on campus. One of the things I love most about the university is the variety of clubs and organizations available. I have found a group of people who share my interests and passions, and I have made some of my closest friends through these extracurricular activities. I also enjoy the freedom to take a diverse range of classes. I can explore subjects that I



had never even considered before, and I have found myself learning things that I would never have learnt otherwise. One of the challenges of the university is the workload. However, the more I put into my studies, the more I got out of them. I have developed time management skills and have learned how to prioritize my responsibilities. Another challenge was balancing academics, social activities, and self-care. Overall, my university experience was a transformative one. I am growing in so many ways and gaining skills that will stay with me long after graduation and I am grateful for the opportunities and experiences the university has provided me.



# Rahmiin

My time at university has been incredible. I arrived at my university on the first day with new aspirations. "Education is the most powerful weapon which you can use to change the world", Nelson Mandela's quote led me to choose "D pharmacy" course because I wanted to make difference to people's lives and well-being. Seeing new faces and new surroundings made me felt like I am at a different place. For the first time, I was able to observe how different each person may be from another. The majority of folks are incredibly pleasant, and I had fun getting to know them. I now have a wide variety of new pals from various backgrounds. My classrooms



are fantastic, and I love being there. The teaching style used at universities differs from that used in schools and colleges. In my first few months here, I have picked up so many new skills and experiences. The course is rigorous and it can be challenging at times, but in order to succeed in the future, I must assess myself and make necessary adjustments. I am still discovering all the opportunities that university offers me. No doubt, university life builds strong qualities in your personality in positive ways. I want to say that enrolling in the D Pharmacy program at UMT was the best move I have made for my career.



A conceptual image featuring a glowing lightbulb as the central element. The lightbulb is filled with various black-and-white business-related icons and diagrams, including bar charts, pie charts, line graphs, a target, a dollar sign, a key, a plan, and a production flowchart. The lightbulb is positioned directly above an open, thick book with yellowed pages, which rests on a dark wooden surface. The background is a plain, light-colored wall. The overall composition suggests themes of research, innovation, and the connection between knowledge (the book) and ideas (the lightbulb).

## Mohamed Hassan Elnaem,.....Ejaz Cheema

### Abstract:

16



# Methylation pattern and mRNA expression of synapse-relevant genes in the MAM model of schizophrenia in the time-course of adolescence.

Abdul Qayyum Khan, .....Kirsten Jahn

**Schizophrenia, December 2022**

## Abstract

Schizophrenia is highly heritable and aggregating in families, but genetics alone does not exclusively explain the pathogenesis. Many risk factors, including childhood trauma, viral infections, migration, and the use of cannabis, are associated with schizophrenia. Adolescence seems to be the critical period where symptoms of the disease manifest. This work focuses on studying an epigenetic regulatory mechanism (the role of DNA methylation) and its interaction with mRNA expression during development, with a particular emphasis on adolescence. The presumptions regarding the role of aberrant neurodevelopment in schizophrenia were tested in the Methyl-Azoxy-Methanol (MAM) animal model. MAM treatment induces neurodevelopmental disruptions and behavioral deficits in off-springs of the treated animals reminiscent of those observed in schizophrenia and is thus considered a promising model for studying this pathology. On a gestational day-17, adult pregnant rats were treated with the antimitotic agent MAM. Experimental animals were divided into groups and subgroups according to substance treatment (MAM and vehicle agent [Sham]) and age of analysis (pre-adolescent and post-adolescent). Methylation and mRNA expression analysis of four candidate genes, which are often implicated in schizophrenia, with special emphasis on the Dopamine hypothesis i.e., Dopamine receptor D2 (Drd2), and the “co-factors” Disrupted in schizophrenia 1 (DISC1), Synaptophysin (Syp), and Dystrobrevin-binding protein 1 (Dtnbp1), was performed in the Gyrus cingulum (CING) and prefrontal cortex (PFC). Data were analyzed to observe the effect of substance treatment between groups and the impact of adolescence within-group. We found reduced pre-adolescent expression levels of Drd2 in both brain areas under the application of MAM. The “co-factor genes” did not show high deviations in mRNA expression levels but high alterations of methylation rates under the application of MAM (up to ~20%), which diminished in the further time course, reaching a comparable level like in Sham control animals after adolescence. The pre-adolescent reduction in DRD2 expression might be interpreted as downregulation of the receptor due to hyperdopaminergic signaling from the ventral tegmental area (VTA), eventually even to both investigated brain regions. The notable alterations of methylation rates in the three analyzed co-factor genes might be interpreted as attempt to compensate for the altered dopaminergic neurotransmission.

# Health Corner



## Prevention against smog and its associated illnesses

---

**By: Dr Rabia Altaf**

Associate professor School of Pharmacy

Change in weather just like change of time is a universal truth. A change in the weather is followed by change in sceneries, appearances, everyday activities, school and office timings, sleeping schedules, attire choices and last but not the least food items. Extremes of temperature or harsh weather may force birds to migrate for a better option or adapt evolutionary abilities to hibernate for a certain period of time. The issue of air pollution has been increasingly growing in Lahore and overall the province of Punjab and is affecting our respiratory systems.

### What is smog?

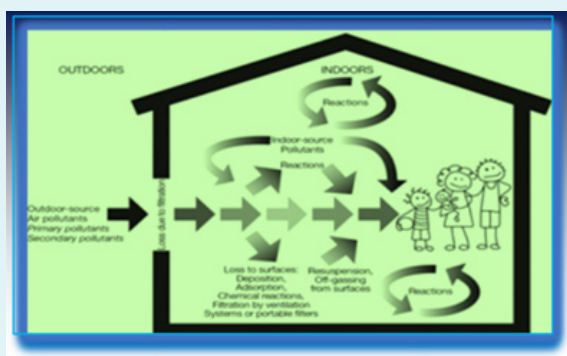
Smog, a dense layer of stagnant air formed due to air pollution is a phenomenon that covers two different concepts; fog and smoke. It can be summer smog as well as winter smog. Although lower level of ozone mixed with certain atmospheric gases is the real cause of smog formation in the densely populated areas where traffic burden is high and fuel consumption adds up to the atmospheric pollution at a miserable rate, still we consider higher level of ozone responsible for our protection from the ultraviolet sun rays. Since smog is in air and we have to breathe in the same air, it attacks our inhaling and exhaling capacity. It may be high risk for asthmatic patients since their capacity is already compromised and such a lower air quality index as prevalent in our local city is a high risk for lungs and related diseases. The World Health Organization estimates that each year 7 million premature deaths around the world are linked to air pollution. The exposure to smog or haze can cause respiratory diseases (chronic obstructive pulmonary disease, asthma, lung cancer, and lower respiratory infections), cerebrovascular diseases, ischemic heart diseases, and other medical conditions. These account for the associated morbidity and mortality. In addition to smog or haze that cannot be easily modified to reduce injuries to individuals exposed to it, some experience additional layers of harmful environmental exposures such as secondhand smoke (also called environmental tobacco smoke). Nonsmokers who breathe in secondhand smoke take in nicotine and toxic chemicals the same way that smokers do.



## How to prevent smog related diseases?

There are certain precautionary measures that must be adapted as our personal and collective responsibility to create an overall smog free environment and support those at risk or those who are suffering from its hazardous effects. As presented in figure 1, these precautionary measures may include:

- 1) Avoid being outdoors near heavy traffic areas to minimize exposure.
- 2) When outside, take rest breaks in the shade & drink plenty of water.
- 3) Avoid strenuous work outdoors.
- 4) Reduce your contribution to pollution by avoiding driving & smoking.
- 5) If driving is unavoidable, drive slow & use headlights plus fog lights / blinkers / hazards even in day time.
- 6) When indoors, close windows & other inlets of air.
- 7) For people with asthma & / or Chronic Obstructive Pulmonary Disease (COPD), have your inhaler with you at all times. Keep your doctor on speed dial if your condition has the potential to worsen.
- 8) Important to note that smog affects everyone differently & some people are more susceptible to its negative effects.
- 9) Children, elders & people with asthma need to be especially careful on smoggy days.
- 10) Bike users must use face masks & glasses to protect their eyes.
- 11) Drink plenty of water & wash your eyes frequently.
- 12) Avoid products that release high levels of volatile organic compounds especially paints.
- 13) Avoid gas-powered yard-equipment, instead use electric appliances as lawn-mowers.



Given the lack of serious and concerted efforts by the government to combat the ongoing air pollution, we need to embrace the above precautionary measures to protect us and our loved ones from the adverse effects of smog

Figure 1: Presenting outdoor and indoor sources creating risk of smog-related diseases

<https://www.npr.org/sections/health-shots/2019/08/13/750581235/air-pollution-may-be-as-harmful-to-your-lungs-as-smoking-cigarettes-study-finds>

Cai H, Wang C. Surviving with Smog and Smoke: Precision Interventions? Chest. 2017 Nov;152(5):925-929. doi: 10.1016/j.chest.2017.06.030. Epub 2017 Jul 8. PMID: 28694198; PMCID: PMC5812760.

Laumbach R, Meng Q, Kipen H. What can individuals do to reduce personal health risks from air pollution? J Thorac Dis. 2015 Jan;7(1):96-107. doi: 10.3978/j.issn.2072-1439.2014.12.21. PMID: 25694820; PMCID: PMC4311076.



*"Wherever the art of Medicine is loved, there  
is also a love of Humanity."*

*Hippocrates.*