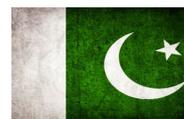


Events Report

“Healthy Lungs for Life” a range of events 2020. Pakistan



Submitted to

European Lung Foundation

Submitted by

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Air Pollution is a global threat leading to large impacts on human lung health and ecosystems. Emissions and concentrations have increased in many areas worldwide. Air pollution is currently the most important environmental risk to human health, and it is perceived as the second biggest environmental concern for citizens, that exposure can influence human vulnerability and susceptibility to the respiratory diseases. Respiratory diseases are on the rise in Pakistan because of the growing trend of smoking, smog and polluted air conditions Air pollution also has considerable economic impacts, reducing life expectancy, increasing medical costs and reducing productivity through working days lost across various economic sectors. People living on low incomes are, in large parts of Pakistan, more likely to live next to busy roads or industrial areas and so face higher exposure to air pollution

Overall, [Pakistan air pollution](#) caused the country to be ranked as the second most polluted in the world. The most populous cities of Pakistan like Karachi, Lahore, Peshawar and Gujranwala (5th populous city, 2.027 million) Lahore and Karachi 1st are polluted cities of the world. In accordance with the World Health Organization's guidelines, the air quality in Pakistan is considered unsafe - the most recent data indicates the country's annual mean concentration of PM2.5 is 58 µg/m³, exceeding the recommended maximum of 10 µg/m³.

Air pollution in Pakistan is caused by a combination of vehicle and industrial emissions, smoke from brick kilns, the burning of crop residue and general waste, and dust from construction sites. Other factors of air pollution include large scale losses of trees to build new roads and buildings.

Pakistan have different exposures, and consequently risk factors, for the development of respiratory diseases as compared to those in higher income countries. Household air pollution (HAP) exposure is an important attributable risk factor for both acute and chronic respiratory diseases in LMICs, including acute respiratory infections, tuberculosis, asthma, COPD, pneumoconiosis, head and neck cancers and lung cancer. Furthermore, short- and long-term exposure to air pollution can lead to reduced lung function, respiratory infections and aggravated asthma. Maternal exposure to ambient air pollution is associated with adverse impacts on fertility, pregnancy, new-borns and children.

In the current circumstances of Covid-19 pandemic to protect the lung more importance as before.

A range of events “Healthy Lungs for Life” granted (1000 €) by European Lung Foundation (ELF) and European Respiratory Society (ERS). The events were aimed at raising awareness and encouraging more people to look after their lungs.

Events included:

Activity:

“Clean Air for Lungs” message was delivered in the context of Covid-19 and smog (a type of intense air pollution) circumstances in Pakistan. The joint activity was held at Government High School for Boys Wahdat Colony Gujranwala City. The 10th Class students were deliberately choose for delivering the message. We all each (Class Teacher, Traffic Police Officers and Myself) spoke out on the current polluted conditions prevailing in the city and what measures should be taken to protect their lungs in this unhealthy environment. After the Questions & Answers session, the brochures were delivered to the students and the remaining were handed over to the Principal for delivering the other classes and staff too.

Partnership:

District City Traffic Police Gujranwala and Government School Education Department

Resources:

Printed Material and interaction session

Date: October 22, 2020

Location: Gujranwala City

Beneficiaries:

A knowledge sharing event was held in Government High School for Boys. Directly 26 students and 2 teachers benefited, and indirectly we reached nearly all school staff and their families, delivered messages of taking precaution measures protect themselves from COVID-19 infections and respiratory diseases.

Photo and Video



Video Link

<https://photos.google.com/search/tra/photo/AF1QipOSzHnnMM6tiqChp71GceorGYEzV6APGO-pE9Jt>

Activity:

Importance of healthy lungs for life message advertised in newspapers in the context of general public awareness

Partnership:

Print media (newspaper)

Resources:

Print media “message advertisement in newspapers”

Date:

October 24-25, 2020

Location

District Gujranwala

Beneficiaries:

The advertisement is very relevant to address the current environmental conditions in Gujranwala city where **Air Quality Index** is worse close to 300 index now a days as October and November are high **Smog months** in central Punjab. The message directly will reach to hundreds of people and indirectly thousand people to motivate them to protect themselves from poor air which leads to lung diseases

Photos



Activity

To increase awareness about respiratory health in Pakistan through social media

Partnership:

City Traffic Office

Resources:

Social media

Date:

October 26-27, 2020

Location

City Traffic Police Official account and @qamargoraya6

Beneficiaries:

Social media users. Social media use rapidly increasing in Pakistan. Public health campaigns are increasingly using social media platforms like Twitter/Facebook raising awareness reaching wider people. In the midst of COVID19 pandemic, it is the best method to reach the maximum number of people in a short period of time

Photos

Personal hotspot : 1 connection(s),Used 37.6 MB

✕ CtoGujranwala on Tw... mobile.twitter.com

← Tweet

 **CtoGujranwala**
@CtoGujranwala

زہریلا دھواں انسانی صحت کے لئے نقصان
دہ اور ماحولیاتی آلودگی کا بڑا سبب ہے۔
آلودہ ماحول ہماری زندگی کو کم کر رہا ہے۔
آئیے سب مل کر اس کا تدارک کریں۔ اور
صاف ماحول میں زندگی گزاریں۔

Translate Tweet

پھیپھڑے ایک نعمت ہیں ان کی حفاظت کریں!

آلودہ ماحول دماغ، ہونیا اور پھیپھڑوں
کے کینسر کا سبب بنتا ہے۔
اگر وہاں رہنا مجبوری
ہو تو ماسک ضرور پہنیں۔

پھیپھڑوں کی آلودگی، ہمارے ماحول کی آلودگی سے
جڑی جڑی ہے۔ اس لیے ہمیں اس کے خلاف
مہم چلانے کی ضرورت ہے۔

اسموگ
smog

دنیا کیلئے ایک انسان ہو لیکن اپنی فیملی کیلئے پوری دنیا ہو۔
کیوں پاکستان ماحولیاتی آلودگی میں
پوری دنیا میں دوسرے نمبر پر ہے!

یاد رکھو!
یاد رکھو!

صحت مند پھیپھڑے بھر پور زندگی
پھیپھڑوں کو آلودہ ہونے سے بچائیں

🏠 🔍 🔔 📧

<https://twitter.com/CtoGujranwala/status/1318154255136624641?s=20>

<https://twitter.com/qamargoraya6/status/1343501627618193408?s=20>

Activity:

Disseminating short booklets for spirometry lung testing for patients and general public awareness

Partnership:

District Teaching / General Hospital Gujranwala

Resources:

Short booklets for spirometry lung testing

Date:

October 29-30, 2020

Location

T.B. & Pulmonology department

Beneficiaries:

District teaching and general hospital Gujranwala is busiest health care facility at district level where more than one thousand patients visit daily in different wards like that a number of patients of respiratory diseases come to Asthma, and T.B. centres too. Short booklets were handed over to ward heads for distributing visiting patients





Human lungs play a very vital part in the overall function and survival of every human being. Their primary function is to keep you breathing, and also to keep every other organ in your body functioning optimally. Our respiratory system enables us to breathe and supply oxygen to all parts of the body. As we breathe in air through our nose and mouth, it then travels down the windpipe, through our bronchial tubes and into the lungs. Our bodies use the oxygen we breathe in, and we exhale carbon dioxide.

In accordance with the World Health Organization's guidelines, the air quality in Pakistan is considered unsafe - the most recent data indicates the country's annual mean concentration of PM2.5 is 58 $\mu\text{g}/\text{m}^3$, exceeding the recommended maximum of 10 $\mu\text{g}/\text{m}^3$.

Sadly, majority of people in Pakistan are unaware of the hazardous health-effects of air pollutants even Air Quality Index is at highest +300 in Lahore (2nd polluted city in the world) and other major cities. 135,000 deaths per year are attributed to ambient air pollution, making it the leading cause of sickness and death in Pakistan, as well as reduced life expectancy by 60 months. Smog is a public health emergency 5.88% of GDP or \$47.8 billion is the estimated economic burden of air pollution in Pakistan. The main contributors to poor air quality are vehicle emissions, solid waste burning, and industrial emissions. Seasonal variations in pollution exist, with the highest levels of air pollution in the winter (December to March).

How to protect from air pollution: wear mask outdoors - Run an air purifier - Close windows to avoid dirty outdoor air and avoid exercise especially near busy roads

It is generally a good practice to visit your doctor once a year for a general medical check as in major cities of Pakistan air pollution exposure is an important attributable risk factor for both acute and chronic respiratory, including acute respiratory infections tuberculosis, asthma, COPD, pneumoconiosis, head and neck cancers, and lung cancer.

Testing your lungs: spirometry (Lung Functioning Test)

What is spirometry?

A spirometry test measures how healthy your lungs are and can be used to help diagnose and monitor lung conditions. During the test, you will breathe out as much air as you can, as hard as you can, into a device called a spirometer. The test measures how much air you can blow out in total and how much air you can blow

out in the first second of the test. The test should not be painful and usually takes less than 10 minutes.

Should you take a test?

Yes, if:

- You smoke, or you used to smoke
- You cough a lot
- You become short of breath when walking quickly
- You are worried about the health of your lungs
- You are already receiving treatment for a lung condition



What happens during the test?

Your healthcare professional will show you how to blow into the spirometer before you begin. You may need to wear a soft clip over your nose to stop air leaking out of your nostrils. Before starting the test, you might be asked to breathe in deeply and out gently into the spirometer. You will then be asked to blow at least three times, but usually no more than 10 times, into the spirometer.

During the spirometry test, you must:

- Breathe in as deeply as you can and place your lips tightly around the mouthpiece.
- Try your hardest and blast out your air as quickly as possible.
- Keep blowing out until your lungs are empty and your healthcare professional tells you to stop.

Understanding your results

Your healthcare professional will use your results (FEV1 and FVC) to decide how well your lungs are working. If the amount of air you can blow out during the first second is low, you may have a narrowing of your airways, possibly due to asthma or chronic obstructive lung disease (COPD). If you are already receiving treatment for asthma or COPD (such as an inhaler), the spirometry test can be used to check that the treatment is helping your lungs to work as well as possible. The test may also be useful to rule out some other lung conditions.

Healthcare professionals use charts to understand how your results compare to a “normal measurement”. Imagine that 100 people of the same age, sex and height as you had taken the test, you can see where your results fit within this group and therefore how healthy your lungs are.

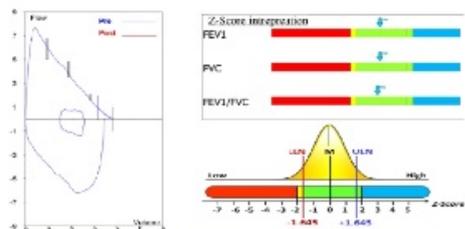


The lung growth charts were developed by the Global Lung Function Initiative using information on lung function from people around the world.

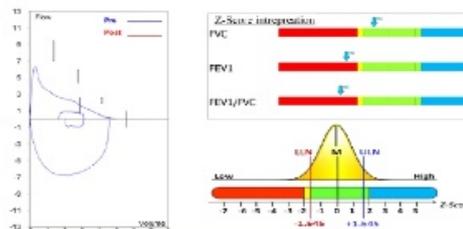
What does this mean for your results?

For every person, there is a range of results that is considered normal for your age and height.

For example, if your lung function was normal for your age, height, sex and ethnic background it may look like the picture on the left. However, if you had a lung condition that needed treatment it may look like the picture on the right.



Spirometry results for a person with normal lung function for their age, height, sex and ethnic background



Spirometry results for a person that may have a lung condition that needs treatment

How should you prepare for the test?

The results of your test could be affected by certain activities, like smoking, drinking coffee, doing strenuous exercise and eating a large meal, beforehand.

If you take medications for a lung condition, you may be asked to not use them for a set amount of time before the test.

Ask your healthcare professional in advance of the test how you can prepare.

Problems you might have during the test

The hard blows needed for this test are difficult for some people. If you become tired or lightheaded during the test, ask for a couple of minutes to catch your breath before trying again. Some people may find that the test makes them want to cough. If this happens, try and clear your chest before you try again.

What happens if the test results look abnormal or if you have a lung condition?

Your healthcare professional may ask you to inhale a medication that helps with breathing, wait 10–15 minutes and then repeat the test. This helps them to see whether any damage to the lungs is reversible and whether a prescription for an inhaler is likely to improve your breathing.

How you respond to this medication, known as a bronchodilator, may also help the doctor to tell whether you have asthma (which will improve after the bronchodilator) or COPD (which shows less improvement).

My test results are normal – does that mean I am healthy?

If you have had asthma-like symptoms in the past but the results of your spirometry test are normal, you may still have asthma.

If you smoke, or breathe in hazards like dusts, smoke, fumes or chemicals at work, and your results are normal, you are still at a high risk of different lung conditions and should do as much as you can to protect your lungs.

It is never too late to give up smoking, and there is support available – ask your healthcare professional how they can help you to quit. The ELF website has lots of information and tips on quitting smoking which you can download in a range of

languages, so this could be a good place to start.

Will I need any more tests?

The spirometry test is an important measure of lung function. If your symptoms vary (for example with asthma) you may be asked to repeat the test at different times, in which case you could take note of your results so you know what is a normal result for you. If you have an ongoing lung condition regular spirometry may be used to monitor it. In addition, you may be asked to carry out some more tests if the doctor needs to investigate further. Spirometry can also be part of other lung function testing, like an exercise test or a bronchial challenge test.



Further reading

- **European Lung Foundation website: www.europeanlung.org**
For more information on lung conditions and how to look after your lungs.
- **Healthy Lungs for Life website: www.healthylungsforlife.org**
Find out more about the Healthy Lungs for Life campaign, and get information on the importance of clean air, physical activity and stopping smoking for your lungs.

Global Lung Function Initiative: www.ers-education.org/guidelines/global-lung-function-initiative Learn more about the Global Lung Function Initiative, through which a group of researchers and clinicians are developing reference values for lung function tests to make sure that your test result is accurate, by collecting information on lung function from people around the world.



The European Lung Foundation (ELF) was founded by the European Respiratory Society (ERS), with the aim of bringing together patients, the public and respiratory professionals to positively influence respiratory medicine. ELF is dedicated to lung health throughout Europe, and draws together the leading European medical experts to provide patient information and raise public awareness about lung disease.

This material was originally compiled with the help of ERS spirometry expert Paul Enright, MD. It was reviewed in July 2018 as part of the Global Lung Function Initiative with the help of Sanja Stanojevic, PhD and Professor Graham Hall.

Stay Healthy & Safe

Compiler: Qamar Iqbal

Photos



Activity

Traffic-related air pollution is a type of **air pollution** that comes from the emissions of rickshaws motor vehicles has been considered to be a major risk factor for cardiovascular disease, including hypertension. We (with traffic police officers) spoke out a gathering at busy road choak particularly drivers distributing graphic brochures and delivering information on the dangers of traffic related air pollution.

Partnership:

City Traffic Police Gujranwala

Resources:

Disseminated information through brochures and lectures

Date:

November 2, 2020

Location

Gujranwala City

Beneficiaries:

Resources:

Electronic media “TV. Channels”

Date:

December 19-20-21, 2020

Location

All over Pakistan

Beneficiaries:

“Stay safe and healthy” message in this air pollution, Smog and Covid-19 circumstances needed a campaign on TV. Which is an important part of a comprehensive approach to control respiratory diseases in Pakistan. We’re also reaching the people who will see the short documentary/ news and stay on track

Videos of TV Channels



Link of videos

https://photos.google.com/search/_tv_Videos

Activity:

Article (to be published)

Partnership:

European lung Foundation and European Respiratory Society

Resources:

Print media

Date:
2021

Location
No

Beneficiaries:

Newspaper readers

Air Pollution, Smog and Covid-19 - interlinks

Air Pollution is a global threat leading to large impacts on human health and ecosystems. Emissions and concentrations have increased in many areas worldwide. Air pollution is currently the most important environmental risk to human health, and it is perceived as the second biggest environmental concern for citizens, that exposure can influence human vulnerability and susceptibility to the respiratory diseases.

Respiratory diseases are on the rise in Pakistan because of the growing trends of smoking, smog and polluted air conditions. Air pollution continues to have significant impacts on the health of the population, particularly in urban areas. Some population groups are more affected by air pollution than others, because they are more exposed or susceptible to environmental hazards. Lower socio-economic groups tend to be more exposed to air pollution, while older people, children, elderly people, pregnant women and those with pre-existing health conditions are more susceptible. Air pollution also has considerable economic impacts, reducing life expectancy, increasing medical costs and reducing productivity through working days lost across various economic sectors. People living on low incomes are, in large parts of Pakistan, more likely to live next to busy roads or industrial areas and so face higher exposure to air pollution.

Smog is a type of intense air pollution. There are short term symptoms resulting from exposure to air pollution include itchy eyes, nose and throat, wheezing, coughing, shortness of breath, chest pain, headaches, nausea, and upper respiratory infections (bronchitis and pneumonia). It also exacerbates asthma and emphysema. **Lahore**, the capital of Punjab Province, is considered one of the world's most polluted cities. During the so-called "smog season" running from October to February, "poor fuel quality, uncontrolled emissions and crop burning worsens the quality of the already unhealthy air in Punjab," Seasonal variations in pollution exist, with the highest levels of air pollution in the winter (December to March). It has been corroborated by the World Health Organization that 4.2 million people die every year as a result of exposure to ambient air pollution and Pakistan was declared the second most polluted country during the year 2020. Available data indicates that Peshawar, Rawalpindi, Karachi, Islamabad, and Lahore have consistently high levels of air pollution. In accordance with the World Health Organization's guidelines, the air quality in Pakistan is considered unsafe - the most recent data indicates the country's annual mean concentration of PM2.5 is 58 µg/m³, exceeding the recommended maximum of 10 µg/m³.

Latest researches are linking air pollution and respiratory health issues during the pandemic, the potential role of exposure to air pollution in susceptibility and severity of COVID-19 infection, COVID-19 infections is still rising in Pakistan. There have been at least 52,359 reported infections and 8,303 reported deaths caused by the new coronavirus so far, a total of 352,529 people have recovered from the virus while the active number of cases stands at. With 41,115 tests conducted across Pakistan, the positivity rate has reached 7.59%. Air pollution can cause heart and lung diseases, stroke and diabetes – all of which are risk factors for severe symptoms of COVID-19. Better air quality during quarantine at the beginning of the COVID-19 pandemic has been linked with fewer deaths from conditions such as COPD, heart disease and stroke.

When the air you breathe in is “unhealthy”, it exposes your lungs and, by extension, the rest of your body to all forms of health hazards which might lead to various forms of lung related health complications and ill-health. To maintain healthy lungs therefore, it is imperative that you become aware and alert to some of the risk factors that can contribute to poor lung health, and also, to know what you can do to protect your lungs from such hazards. From the foregoing, the importance of healthy lungs cannot be overemphasized. However, over the years, problems affecting lung health have grown in magnitude and importance globally, to such an extent that the Forum of International Respiratory Societies (FIRS), an organizations comprising of the world’s leading international respiratory societies, working together to improve lung health globally, has set aside the 25th of September of every year as World Lung Day, to create awareness about lung health, as well as, share information about improving lung health globally.

Fortunately, most respiratory diseases are preventable by improving the quality of air. The common sources of unhealthy air are tobacco smoke, indoor and outdoor air pollution, and air containing microbes, toxic particles, fumes, or allergens. Thus, to keep your lungs healthy and prevent the wide array of respiratory diseases, the following are recommended: Discouraging individuals from starting to smoke tobacco and encouraging smokers to quit smoking are the first and most important priorities in preventing COPD.

Reducing air pollution saves lives and reduces the risk of many diseases. Vaccinations are essential for the control and elimination of many childhood respiratory diseases (e.g. the pneumococcal pentavalent vaccine). Controlling unhealthy air in the workplace can prevent occupational lung disease. Respiratory diseases are responsible for a significant burden worldwide from direct healthcare costs, significant disability, premature mortality, lost productivity and social consequences. It is generally a good practice to visit your doctor once a year for a general medical check. However, should you be feeling unwell or suspect yourself of experiencing any unusual symptoms, it is always a wise decision to consult your doctor at your earliest convenience, for further assessment and treatment

Effective action to reduce air pollution and its impacts requires a good understanding of its sources, how pollutants are transported and transformed in the atmosphere, how the chemical composition of the atmosphere changes over time and how pollutants affect humans, ecosystems, the climate and subsequently society and the economy. To curb air pollution, collaboration and coordinated action at international, national and local levels must be maintained, in coordination with other environmental, climate and sectoral policies. Holistic solutions involving technological developments, structural changes and behavioural changes are also needed, together with an integrated multidisciplinary approach. Efforts to achieve most of the Sustainable Development Goals (SDGs).

(Qamar Iqbal)