

# DOCTORS FOR CLEAN AIR



## ONBOARDING GUIDE

[www.dfca.org.in](http://www.dfca.org.in)

Clean Air is a Human Right  
Gift of Clean Air to Future Generation : Our Duty



# Brief Background of the initiative

Air Pollution is a **Public Health Emergency**. The simple act of breathing is causing many chronic health issues and leading to over 7 million premature deaths across the world. Dr. Tedros Adhanom, Director General of the World Health Organization, has called Air Pollution as the New Tobacco.

Air quality in India is no exception. Over 99.3% of India's population breathes polluted Air that is above the standards set by WHO. According to Air Quality Life Index (AQLI), an average Indian could gain 4.3 years in life expectancy if the WHO standards are met.

In spite of the significantly high levels of Air Pollution and efforts by government, media, and NGOs to raise awareness about ill-effects of Air Pollution, most of our population is unaware of the damage caused by Air Pollution to their health. Not only there is very little demand from people for strict steps to reduce Air Pollution, but also many steps taken by the Government towards Clean Air are often criticized and not complied with by the people as it causes inconvenience to them. Lack of information about the severe health ill effects of air pollution, including the damage occurring to their children is the reason for people's opposition to any corrective measures to control air pollution. If people are made aware of the seriousness of the issue, they will not only accept the measures but will also contribute actively towards solutions.

Since Air Pollution affects the health of the people, Doctors are in the best position to talk about it. Their talking will not only have immediate connect with the people but will also be far more convincing. These circumstances are the foundation for the **“Doctors for Clean Air”**, an initiative of Lung Care Foundation, supported by Health Care Without Harm, to engage and empower Doctors to become advocates for Clean Air.

## Why Doctors for Clean Air

Doctors experience the PAIN of health ill effects of air pollution first hand when they see and manage these patients in their practice. Additionally, when doctors talk to their patients and families, they are more likely to be able to motivate them as they talk from a position of strength. Thus, doctors can be a **“motivated motivator”**. They can translate the studies across the world which link Air Pollution and health into simple, understandable words for the common people.

**“Doctors for Clean Air” (DFCA)** is a network of identified, passionate and informed Doctors who are leading the fight against Air Pollution in their respective regions across India.

## An Initiative of:



**Lung Care Foundation** established on 25th May 2015 as a registered not-for-profit organization is dedicated towards the cause of promoting 'Lung Health' in India. Our vision is 'Care & Cure of 2.6 Billion Lungs in India' by preventing lung diseases through Education, Research and providing state of the art Clinical Care accessible to all.

- ▶ Lung Health Awareness Programs
- ▶ Patient Education Series
- ▶ Lung Health Screening Camps
- ▶ Guinness World Record for 'Largest Human Image of an Organ'
- ▶ Breathe Easy Stay Tough (B.E.S.T.) School Clubs
- ▶ Nationwide network of Doctors For Clean Air

## Supported by:



**Health Care Without Harm** is an international NGO that works to transform healthcare worldwide and reduce its environmental footprint by becoming a community anchor for sustainability and a leader in the global movement for environmental health and justice.

With regional offices in 4 continents, partners around the world for global and regional initiatives, Health Care Without Harm is leading the global healthcare sustainable movement.

# UNDERSTANDING AIR POLLUTION 101

Air pollution, by definition, refers to the presence of undesirable components (above the set limits) that contaminate the air and are detrimental to human health, ecosystem or planet as a whole. There are 2 kinds of Air Pollution:

## AMBIENT OUTDOOR AIR POLLUTION

Refers to contamination of outside air due to toxic emissions from combustion of fuels, chemical industries, vehicles, construction activities etc

## HOUSEHOLD INDOOR AIR POLLUTION

Refers to contamination of the air inside homes and buildings from compounds such as smoke, CO, dust, formaldehyde, asbestos, pesticides, lead, cleaning solvents, chloroform etc. Indoor air pollution is 5-10 times more harmful than outdoor air pollution

## TYPES OF POLLUTANTS IN OUR AIR

There are 2 major types of pollutants in our Air:

### Particulate Matter (PM)

Fine or ultrafine particles containing a mix of toxic metals, hydrocarbons & liquids suspended in the air that can penetrate deep into the airways, lungs and then enter the bloodstream to cause damage. The most commonly talked about pollutants are PM10 and PM2.5.

### Gaseous Pollutants

Mixture of gases and hydrocarbons suspended in the air above permissible limits. These toxic gases released from combustion of fossil fuels, atmospheric reactions etc are harmful for human health when inhaled and are known to cause many respiratory ailments.

#### PM 10

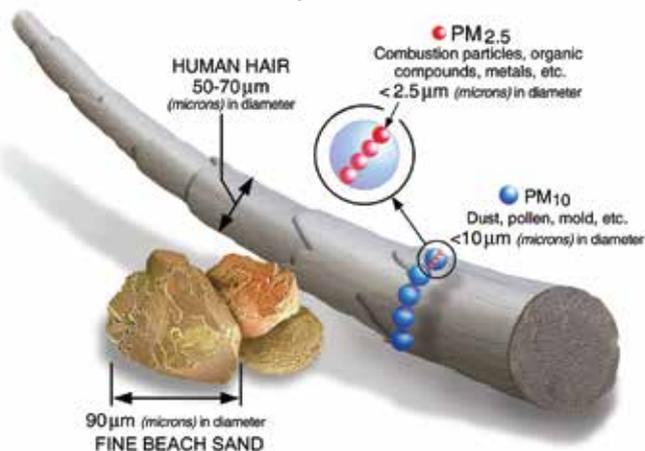
- ▶ Particles with diameter of 10 micrometres or less.
- ▶ Primarily comes from Dust Pollution
- ▶ Can pass through the nose, throat and enter the lungs
- ▶ Includes airborne particles like pollen, mold etc.

- ▶ Nitrogen Oxide
- ▶ Sulphur Dioxide
- ▶ Carbon Monoxide
- ▶ Volatile Organic Compounds (VOCs)
- ▶ Greenhouse Gases such as Methane
- ▶ Ground Level Ozone
- ▶ Black Carbon (Sooty Particles)

#### PM 2.5

- ▶ Particles with diameter of 2.5 micrometers or less.
- ▶ Can penetrate deep into the lungs and enter the bloodstream.
- ▶ Includes emissions from combustion engines, organic compounds, metal industries etc

#### Reference Diagram: PM10 & PM2.5 Size



## PRIMARY POLLUTANTS

Chemicals directly emitted into the air. Example: CO<sub>2</sub>, CO, NO<sub>2</sub>, CH<sub>4</sub>, Particulate Matter etc

## SECONDARY POLLUTANTS

Pollutants that are formed from atmospheric reactions between primary pollutants and other compounds in the air. Example: Ground Level Ozone, smog, Peroxyacetyl Nitrate (PAN) etc

# AIR POLLUTION THE INVISIBLE KILLER



The tiny, invisible air pollutants penetrate deep into our lungs, enter the human system through skin, eyes, nose, bloodstream and pose a significant threat to human health from short-term health ill-effects to long-term chronic diseases and even premature death.

## SHORT TERM EFFECTS

- ▶ Headache
- ▶ Nausea
- ▶ Cough
- ▶ Breathlessness
- ▶ Dry Skin
- ▶ Acne
- ▶ Allergic Reactions
- ▶ Hairfall
- ▶ Poor Hair Texture
- ▶ Irritation in Eyes
- ▶ Nose & Throat



**29%**  
OF DEATHS FROM  
**LUNG CANCER**



**24%**  
OF DEATHS FROM  
**STROKE**



**25%**  
OF DEATHS FROM  
**HEART DISEASE**



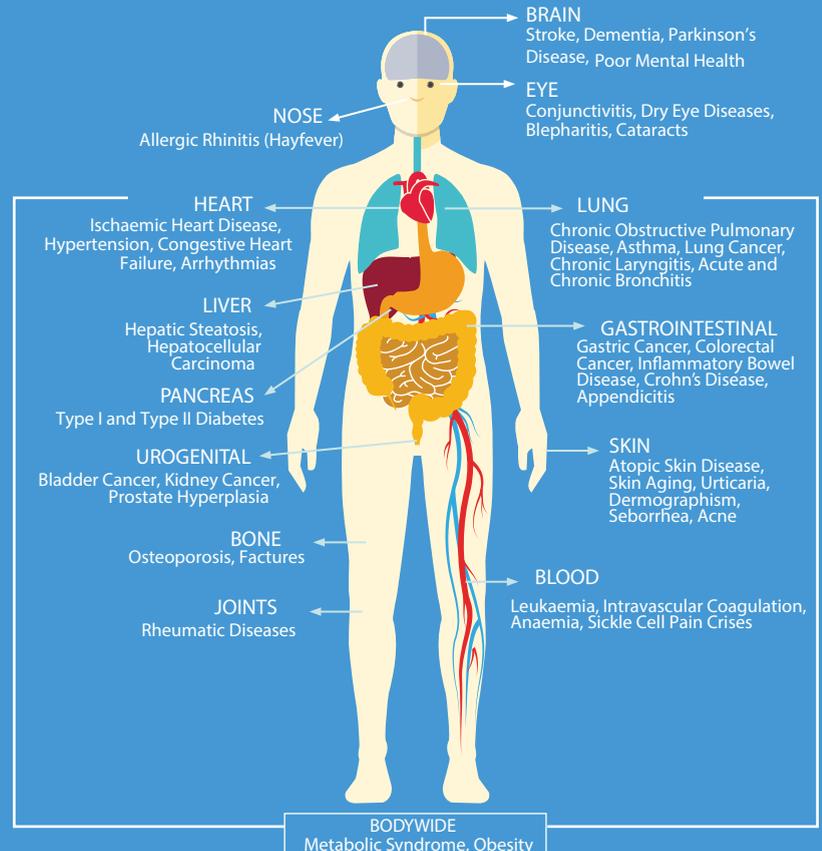
**43%**  
OF DEATHS FROM  
**LUNG DISEASE**

Picture Credit:

**BREATHELIFE**

## LONG TERM IMPACT

### Organs Affected By Air Pollution



Picture Credit : <https://ncdalliance.org/resources/airpollution-policybrief>  
Ref.: Air Pollution and Noncommunicable Diseases:  
[https://journal.chestnet.org/article/S0012-3692\(18\)32722-3/fulltext](https://journal.chestnet.org/article/S0012-3692(18)32722-3/fulltext)

# CALL TO ACTION

## HOW DOCTORS CAN SOLVE THE PROBLEM

We wish Doctors for Clean Air to be a nationwide movement led by informed and passionate Doctors across India, from every district, ensuring a healthy & clean air for us and the future generations.

Doctors for Clean Air will be an example of health sector leadership for other countries.

### 1.

Create Awareness about health ill-effects of Air Pollution by interacting with Children, Civil Society, Politicians, Bureaucrats, Policy Makers, Electronic and Print Media leading to a people's movement for clean air.

### 2.

Create and promote informative videos on Air Pollution among public to tell them about the health impact of Air Pollution and create public outcry for Clean Air.

### 3.

Advocate for Clean Air by engaging with union-level & state-level policy makers and administrators for formulating and implementing policies and laws to control Air Pollution.

### 4.

Coordinate with local agencies to install Air Quality Monitoring Systems in cities, educate public about Air Quality and issue Health Advisories according to the pollution levels.

### 5.

Undertake and promote Research & Health Studies related to Air Pollution in collaboration with Clinics and Hospitals.

### 6.

Engage and empower more health professionals to advocate for Clean Air.



**40 Senior Doctors (representing every state of India) and Leaders of 12 National Medical Associations ( representing over 150,000 Doctors) joined hands to advocate for Clean Air**

Making Sincere Efforts Towards  
“Care & Cure of 2.6 Billion Lungs in India”



5003 Students of Delhi-NCR Create  
Guinness World Record For Largest Human Image of An Organ  
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# DOCTORS FOR CLEAN AIR



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