SRI LAKSHMI NARAYANA INSTITUTE OF MEDICAL SCIENCES

Date: 03/06/2021

From
Dr. Muthukumarsamy. B
Professor and HOD,
Department of General Medicine
Sri Lakshmi Narayana Institute of Medical Sciences
Bharath Institute of Higher Education and Research
Chennai

To
The Dean,
Sri Lakshmi Narayana Institute of Medical Sciences
Bharath Institute of Higher Education and Research
Chennai

Sub: Permission to conduct value-added course: COPD AND AIR POLLUTION

Respected Sir,

With reference to the subject mentioned above, the department proposes to conduct a value-added course titled: "COPD and air pollution" on 08/07/2021. We solicit your kind permission for the same.

Kind Regards

Dr. Muthukumarsamy. B

Dr. B. MUTHUKUMARASAMY, MD
Reg. No: 33723
Professor, General Medicine
Sri Lakshmi Narayana Institute of Medical Sciences
Osudu, Kudapakkam, Puducherry-605 502

FOR THE USE OF DEANS OFFICE

Names of Committee members for evaluating the course:

The Dean: Dr. Jayakumar

The HOD: Dr. Muthukumarasamy. B

The Expert: Dr. Aravind. C

The committee has discussed about the course and is approved.

Subject Expert

Dr. C. ARAVIND, MD.,
Reg.No.:46432
Professor & HOD, General Medicine
Sri Lakshmi Narayana Institute of Medical Sciences
Osudu, Kudapakkam, Puducherry-605 502

HOD

Dr. B. MUTHUKUMARASAMY, MD
Reg. No: 33723
Professor, General Medicine
Sri Lakshmi Narayana Institute of Medical Sciences
Osudu, Kudapakkam, Puducherry-605 502

OFFICE OF THE DEAN

Sri Lakshmi Narayana Institute of Medical Sciences

OSUDU, AGARAM VILLAGE, VILLIANUR COMMUNE, KUDAPAKKAM POST,
PUDUCHERRY - 605 502.
[Recognised by Medical Council of India, Ministry of Health letter No. U/12012/249/2005-ME (P -II) dt. 11/07/2011]
[Affiliated to Bharath University, Chennai - TN]

Circular

10/06/2021

Sub: Organising Value-added Course: COPD AND AIR POLLUTION reg

With reference to the above-mentioned subject, it is to bring to your notice that Sri Lakshmi Narayana Institute of Medical Sciences, **Bharath Institute of Higher Education and Research**, is organisinga Value-added course, titled, "COPD and air pollution" between July 2021 and September 2021. The course content is enclosed below.

The hard copy of the application should be sent to the institution by registered/ speed post only so as to reach on or before 28/06/2021. Applications received after the mentioned date shall not be entertained under any circumstances.

Encl: Copy of Course content.

COURSE PROPOSAL

Course Title: COPD and air pollution

Course Objective: To create an awareness among students of the Second year M.B.B.S about COPD; its etiopathogenesis; the role of air pollution (both indoor and outdoor) in causing airway inflammation and worsening the disease status in people with COPD

Course Outcome: The students learnt about the implications of air pollution on COPD – the disease etiopathogenesis and progression, including treatment strategies.

Course Audience: A batch of 25 students belonging to the 2nd year of M.B.B.S

Course Coordinator: Dr. Muthukumarasamy. B

Course Faculties with Qualification and Designation:

1. Dr. C Aravind
   M.B.B.S, M.D Gen Medicine
   Professor,
   Dept of General Medicine
2. Dr. Arul Murugan
   Associate Professor
   Dept of General Medicine

Course Curriculum/Topics with schedule

SlNo	Date	Topic	Time	Hours	Name of faculty
1.	08/07/2021	Chronic obstructive pulmonary diseases	5 pm to 7 pm	2 hours	Dr. Arul Murugan
2.	11/07/2021	Pathogenesis	4: 30 pm to 6: 30 pm	2 hours	Dr. C Aravind
3.	15/07/2021	Airway inflammation and air pollutants	5 pm to 7 pm	2 hours	Dr. Arul Murugan
4.	18/08/2021	Testing for copd	5 pm to 7 pm	2 hours	Dr. Arul Murugan
5.	22/08/2021	What is healthy air?; if such a thing exists	5 pm to 7 pm	2 hours	Dr. C Aravind
6.	01/08/2021	Indoor air pollution	4: 30 pm to	2 hours	Dr. C Aravind

			6: 30 pm		
7.	05/08/2021	Outdoor air pollution	5 pm to 7 pm	2 hours	Dr. Arul Murugan
8.	08/08/2021	Tobacco smoking – the killer amidst it all	5 pm to 7 pm	2 hours	Dr. C Aravind
9.	12/08/2021	Factories and pollutants	4 pm to 6 pm	2 hours	
10.	19/08/2021	How air pollution worsens the disease in people with COPD	4 pm to 6 pm	2 hours	Dr. Arul Murugan
11.	09/09/2021	Are we offering our future generation a healthy lung	4 pm to 6 pm	2 hours	Dr. Muthukumarasamy. B
12.	16/09/2021	Age old practices that are harming the atmosphere	4 pm to 6 pm	2 hours	Dr. C Aravind
13.	23/09/2021	What socio- cultural changes need to brought about	4 pm to 6 pm	2 hours	Dr. Arul Murugan
14.	26/09/2021	Sustainable fuel alternatives	4 pm to 6 pm	2 hours	Dr. Arul Murugan
15.	29/09/2021	A vision for the future	4 pm to 6 pm	2 hours	Dr. Muthukumarasamy. B
			Total Hours	30	

REFERENCE BOOKS:

1. **HARRISON'S PRINCIPLES OF INTERNAL MEDICINE; 18th EDITION**
2. **MURRAY AND NADEL'S TEXTBOOK OR RESPIRATORY MEDICINE**

VALUE ADDED COURSE

1. Name of the programme and code

   COPD and air pollution; IM03

2. Duration & period

   30 hrs; between July 2021 – September 2021

3. Information Brochure and course content of value-added courses

   Enclosed as Annexure – I

4. List of students enrolled

   Enclosed as Annexure – II

5. Assessment procedures:

   Short notes – Enclosed as Annexure – III

6. Certificate model

   Enclosed as Annexure – IV

7. No. of times offered during the same year

   1; July 2021 – September 2021

8. Year of discontinuation

   2022

9. Summary report of each program year wise:

VALUE ADDED COURSE: July 2021 – September 2021					
Sl. No.	Course code	Course name	Resource persons	Target Students	Strength and year
1	IM03	COPD and air pollution	Dr. C. Aravind Dr. Arul Murugan	Second year MBBS	25 (July 2021 – September 2021)

10. Course feedback

    Enclosed as Annexure - V

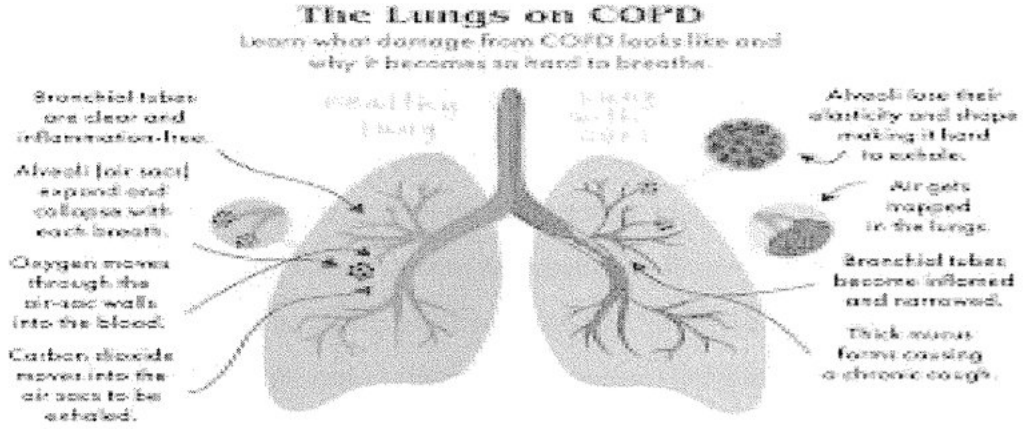
RESOURCE PERSON – Dr. C. Aravind

COORDINATOR- Dr. Muthukumarasamy. B

Dr. C. ARAVIND, MD.,
Reg No 68432
HOD - General Medicine
Lakshmi Narayana Institute of Medical Sciences
Dr. B. MUTHUKUMARASAMY, MD.,
Reg. No: 33723
Professor, General Medicine
Lakshmi Narayana Institute of Medical Science

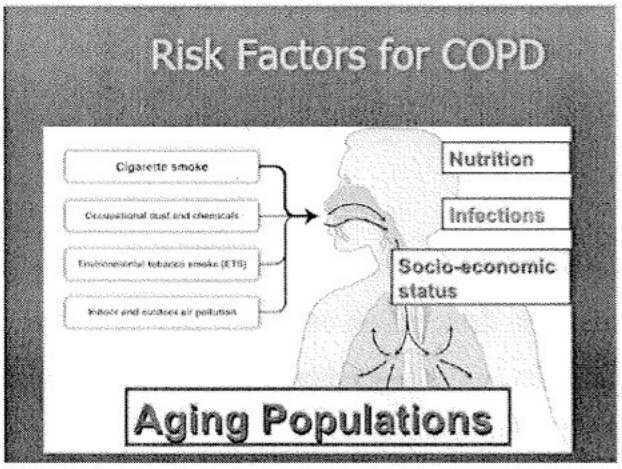
CHRONIC OBSTRUCTIVE PULMONARY DISEASE AND AIR POLLUTION

A chronic and progressive lung disorder characterized by the loss **of elasticity of the bronchial tree and the air sacs, destruction of** the air sacs wall, thickening of the bronchial wall, and mucous **accumulation in the bronchial tree.** The pathologic changes result in the disruption of the air flow in the bronchial airways. Signs and symptoms include shortness of breath, wheezing, productive cough, and chest tightness. The two main types of chronic obstructive pulmonary disease are chronic obstructive bronchitis and emphysema.



PATHOGENESIS OF COPD:

The development of COPD is multifactorial and the risk factors of COPD include genetic and environmental factors.



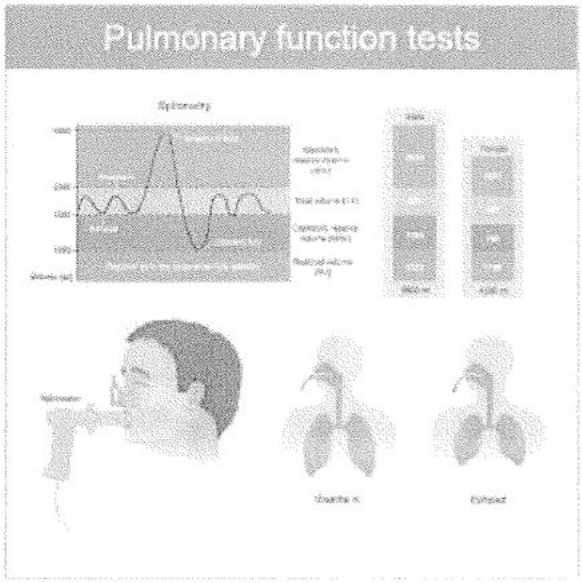
Pathological changes in COPD are observed in central airways, small airways and alveolar space. The proposed pathogenesis of COPD includes proteinase-antiproteinase hypothesis, immunological mechanisms, oxidant-antioxidant balance, systemic inflammation, apoptosis and ineffective repair. The global prevalence of physiologically defined chronic obstructive pulmonary disease (COPD) in adults aged >40 year is approximately 9-10 per cent. Recently, the Indian Study on Epidemiology of Asthma, Respiratory Symptoms and Chronic Bronchitis in Adults had shown that the overall prevalence of chronic bronchitis in adults >35 year is 3.49 per cent. Airflow limitation in COPD is defined as a postbronchodilator FEV1 (forced expiratory volume in 1 sec) to FVC (forced vital capacity) ratio <0.70. COPD is characterized by an accelerated decline in FEV1. Co morbidities associated with COPD are cardiovascular disorders (coronary artery disease and chronic heart failure), hypertension, metabolic diseases (diabetes mellitus, metabolic syndrome and obesity), bone disease (osteoporosis and osteopenia), stroke, lung cancer, cachexia, skeletal muscle weakness, anemia, depression and cognitive decline.

MANAGEMENT OF COPD:

Diagnosing COPD using spirometry

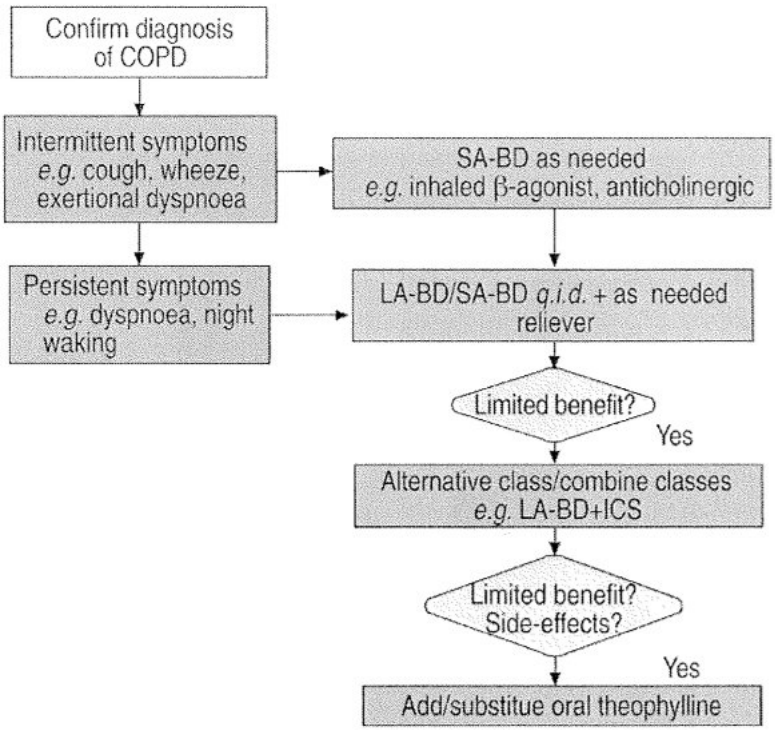
- Forced vital capacity (FVC): the maximum amount of air the patient can blow out from a full inspiration to full expiration during a forced blow
- Forced expiratory volume in 1 second (FEV1): the maximum volume of air the patient can blow out in the first second of a forced blow

- FEV1/FVC: the volume of air expired during the first second of a forced blow, expressed as a percentage of FVC



The assessment of COPD is required to determine the severity of the disease, its impact on the health status and the risk of future events (e.g., exacerbations, hospital admissions or death) and this is essential to guide therapy.

COPD is treated with inhaled bronchodilators, inhaled corticosteroids, oral theophylline and oral phosphodiesterase-4 inhibitor. Non pharmacological treatment of COPD includes smoking cessation, pulmonary rehabilitation and nutritional support. Lung volume reduction surgery and lung transplantation are advised in selected severe patients. Global strategy for the diagnosis, management and prevention of Chronic Obstructive Pulmonary Disease (GOLD criteria) guidelines recommends influenza and pneumococcal vaccinations.



THE EFFECTS OF AIR POLLUTION

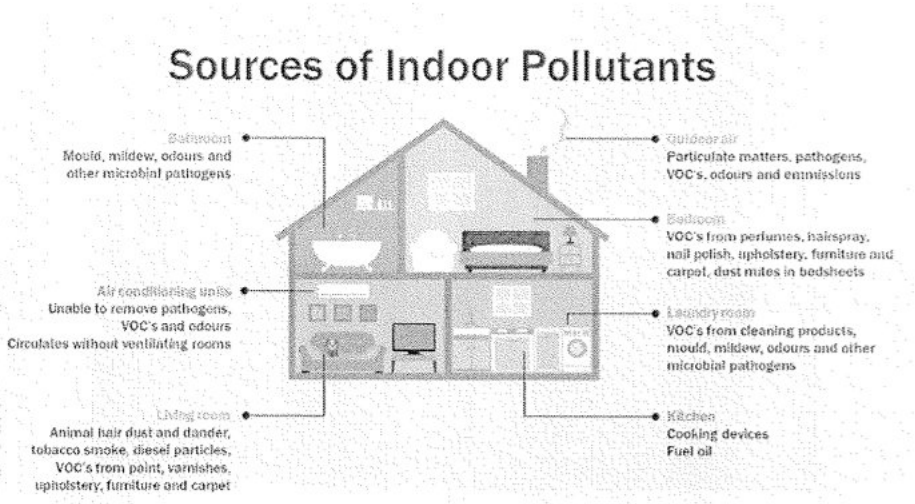
Ambient air pollution increases the risk of respiratory mortality, but evidence for impacts on lung function and chronic obstructive pulmonary disease (COPD) is less well established. Polluted air contains tiny particles called "irritants" that damage the lungs. This damage to the lungs can happen by

1. Inhaling a small amount of irritants over a long period of time, or
2. Inhaling a large amount of irritants over a short period of time

INDOOR AIR POLLUTION:

Indoor pollution describes irritants in the air inside the home. The types of indoor air pollution that have the greatest effect on COPD are:

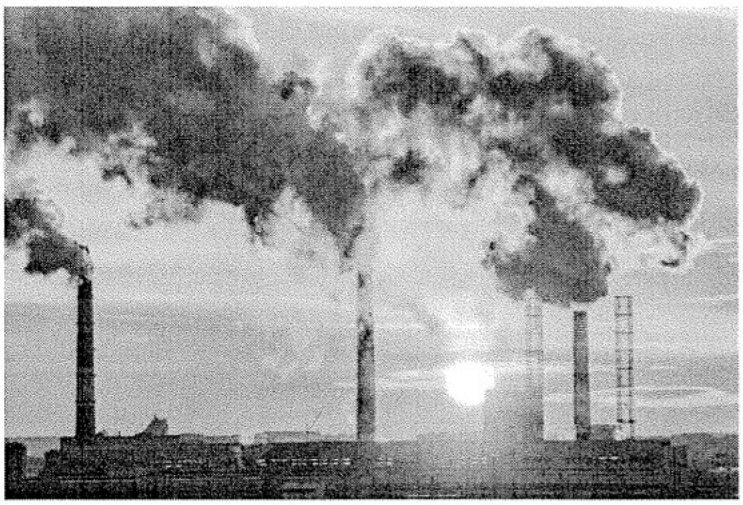
- Tobacco smoke
- Smoke from burning fuel inside



People who live in a home with these kinds of indoor air pollution have a higher risk of getting COPD. Secondhand smoke is the cigarette smoke of someone else who is smoking. In homes where people smoke indoors, the air becomes filled with harmful particles of tobacco smoke. Breathing in secondhand smoke is also called “passive smoking.” Over time, breathing in this polluted indoor air can cause serious problems, such as respiratory infections and asthma. Being exposed to secondhand smoke over time can sometimes cause someone who has never smoked to develop COPD. For people who have COPD, secondhand smoke and passive smoking can make their symptoms worse. Cigarette smoking – including passive smoking – is the most common cause of COPD in the United States and many other countries.

But in certain countries, air pollution caused by burning fuel inside the home causes more cases of COPD than smoking does. Around the world, billions of people burn wood or coal indoors to cook food and heat their homes. Breathing in the smoke from the burning fuel can damage the lungs over time and cause COPD. This is especially a problem if the home is not well ventilated. Women and children who spend large amounts of time in the home have the highest risk of getting COPD from burning fuel indoors.

OUTDOOR AIR POLLUTION:



Outdoor pollution describes irritants in the air outside the home. It is also called "urban air pollution." Large cities with heavy traffic and large industrial areas often have higher levels of outdoor pollution. Heavily polluted outdoor air might contain thousands of different harmful particles. For people with COPD, living in a place with high levels of outdoor air pollution can be very harmful to their quality of life. Outdoor air pollution can affect them in the following ways:

- COPD symptoms get worse
- Increased risk of respiratory infections
- Respiratory infections can cause dangerous COPD attacks

GREENHOUSE GASES

The most damaging greenhouse gas, carbon dioxide, is released into the atmosphere from the burning of fossil fuels. Factory emissions contribute greatly to the release of carbon dioxide into the atmosphere. Industry and electrical generating factories contribute slightly more than 50 percent of greenhouse gases. Another harmful gas from the use of fossil fuels is sulfur dioxide, a key ingredient in the formation of acid rain. Sulfur dioxide, however, is a double-edged sword. While it contributes greatly to acid rain, its presence in the atmosphere helps cool the air to counteract the heating caused by carbon dioxide

For people with COPD, living in a place with high levels of outdoor air pollution can be very harmful to their quality of life. Outdoor air pollution can affect them in the following ways:

- COPD symptoms get worse
- Increased risk of respiratory infections
- Respiratory infections can cause dangerous COPD attacks

AIR POLLUTION CONTROL

Following are the measures one should adopt, to control air pollution:

Avoid Using Vehicles

People should avoid using vehicles for shorter distances. Rather, they should prefer public modes of transport to travel from one place to another. This not only prevents pollution, but also conserves energy.

Energy Conservation

A large number of fossil fuels are burnt to generate electricity. Therefore, do not forget to switch off the electrical appliances when not in use. Thus, you can save the environment at the individual level. Use of energy-efficient devices such CFLs also controls pollution to a greater level.

Use of Clean Energy Resources

The use of solar, wind and geothermal energies reduce air pollution at a larger level. Various countries, including India, have implemented the use of these resources as a step towards a cleaner environment.

Other air pollution control measures include:

1. By minimizing and reducing the use of fire and fire products.

2. Since industrial emissions are one of the major causes of air pollution, the pollutants can be controlled or treated at the source itself to reduce its effects. For example, if the

reactions of a certain raw material yield a pollutant, then the raw materials can be substituted with other less polluting materials.

3. Fuel substitution is another way of controlling air pollution. In many parts of India, petrol and diesel are being replaced by CNG – Compressed Natural Gas fueled vehicles. These are mostly adopted by vehicles that aren't fully operating with ideal emission engines.

4. Although there are many practices in India, which focus on repairing the quality of air, most of them are either forgotten or not being enforced properly. There are still a lot of vehicles on roads which haven't been tested for vehicle emissions.

5. Another way of controlling air pollution caused by industries is to modify and maintain existing pieces of equipment so that the emission of pollutants is minimized.

6. Sometimes controlling pollutants at the source is not possible. In that case, we can have process control equipment to control the pollution.

7. A very effective way of controlling air pollution is by diluting the air pollutants.

8. The last and the best way of reducing the ill effects of air pollution is tree plantation. Plants and trees reduce a large number of pollutants in the air. Ideally, planting trees in areas of high pollution levels will be extremely effective.

SUSTAINABLE FUEL ALTERNATIVE

A growing number of people believe alternative fuels will have an expanded role in the cars and trucks of tomorrow.

- Alternative fuels generally have lower vehicle emissions that contribute to smog, air pollution and global warming

- Most alternative fuels don't come from finite fossil-fuel resources and are sustainable

Regardless, the fuels on this list have the potential to serve as full or partial alternatives to gasoline and diesel. Here is our Top Eight list of alternative fuels.

1. Ethanol

An alcohol-based alternative fuel made by fermenting and distilling crops such as corn, barley or wheat. It can be blended with gasoline to increase octane levels and improve emissions quality. Positive: Materials are renewable. Negative: Ethanol subsidies have a negative impact on food prices and availability.

2. Natural Gas

Natural gas is an alternative fuel that burns clean and is already widely available to people in many countries through utilities that provide natural gas to homes and businesses. Positive: Cars and trucks with specially designed engines produce fewer harmful emissions than gasoline or diesel. Negative: Natural gas production creates methane, a greenhouse gas that is 21 times worse for global warming than CO2.

3. Electricity

Electricity can be used as a transportation alternative fuel for battery-powered electric and fuel-cell vehicles. Battery powered electric vehicles store power in batteries that are recharged by plugging the vehicle into a standard electrical source. Fuel-cell vehicles run on electricity that is produced through an electrochemical reaction that occurs when hydrogen and oxygen are combined. Positive: Electricity for transportation is highly efficient, and we already have an extensive electricity network. In the case of fuel cells, they produce electricity without combustion or pollution. Negative: Much electricity is generated today from coal or natural gas, leaving a bad carbon footprint. (Nonetheless, electric vehicles are still the greenest option around when it comes to cars.)

4. Hydrogen

Hydrogen can be mixed with natural gas to create an alternative fuel for vehicles that use certain types of internal combustion engines. Hydrogen is also used in fuel-cell vehicles that run on electricity produced by the petrochemical reaction that occurs when hydrogen and oxygen are combined in the fuel "stack." Positive: No bad emissions. Negative: Cost. And also the lack of fueling infrastructure and difficulty of putting it in place.

5. Propane

Propane—also called liquefied petroleum gas or LPG—is a byproduct of natural gas processing and crude oil refining. Already widely used as a fuel for cooking and heating, propane is also a popular alternative fuel for vehicles. Positive: Propane produces fewer emissions than gasoline, and there is also a highly developed infrastructure for propane transport, storage and distribution. Negative: Natural gas production creates methane, a greenhouse gas that is 21 times worse for global warming than CO2.

6. Biodiesel

Biodiesel is an alternative fuel based on vegetable oils or animal fats, even those recycled after restaurants have used them for cooking. Vehicle engines can be converted to burn biodiesel in its pure form, and biodiesel can also be blended with petroleum diesel and used in unmodified engines. Positive: Biodiesel is safe, biodegradable, reduces air pollutants associated with vehicle emissions, such as particulate matter, carbon monoxide and hydrocarbons. Negative: Limited production and distribution infrastructure

A VISION TO FUTURE

The level of pollution, whether indoor or outdoor, has increased to a dangerous level. As per the report published by the Organisation for Economic Cooperation and Development (OECD), air pollution is the world's biggest cause of premature deaths. Air pollution causes approximately 3.6 million premature deaths per year by 2050. Not only this, breathing polluted air can directly impact your health causing several problems. Some of these are mentioned below:

- Long term exposure to polluted air results in significant health issues like asthma, lung cancer and Chronic Obstructive Pulmonary Disease (COPD).
- Breathing air pollution hampers the functioning of lungs among healthy people resulting in respiratory inflammation and heart problems
- Living in a polluted area and breathing toxic air increases the risk of cancer
- Air pollution weakens the immune system

Air pollution causes severe health effects and to alleviate the impact of air pollution, it is important to keep both indoor and outdoor air healthy and fresh

Annexure II

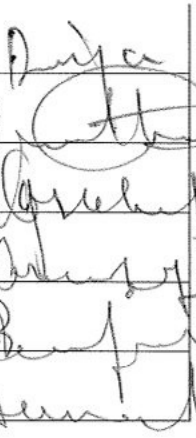
Bharath Institute of Higher Education and Research

Sri Lakshmi Narayana Institute of Medical Sciences

Participant list with signatures

Value-added course: **COPD and AIR POLLUTION (dated 08/07/2021)**

Sl.No	Reg.No	Name of the candidate	Signature
1.	U14MB226	AYYANAN. R	
2.	U14MB227	AZHARUDDIN. R	
3.	U14MB228	BALAJI. K	
4.	U14MB229	BARATHGANESH. A	
5.	U14MB230	BARATH N.S.	
6.	U14MB231	BEAULAH JEBAKUMARI. S	
7.	U14MB232	BENIL.V	
8.	U14MB233	BHUVANESWARI.G	
9.	U14MB234	CHINTHAMANI. A.L.	
10.	U14MB235	DEVI.D	
11.	U14MB236	DARSHANA.M.L	
12.	U14MB237	DHARSHINI .B	
13.	U14MB238	DHIVYA DHARSHINI. N	
14.	U14MB239	DHIVYA PRABHAVADHY. M	
15.	U14MB240	DHULIPUDI NAGA RAMYA	
16.	U14MB241	DINESHKUMAR. K	
17.	U14MB242	DINESH. B	
18.	U14MB243	DINESH. M	
19.	U14MB244	DINESH.S	

20.	U14MB245	DIVYA .M	
21.	U14MB246	GAUTHAM. B	
22.	U14MB247	GOKUL. S	
23.	U14MB248	GUBENDIRAN. R.	
24.	U14MB249	HARIJAN BALASUBRAMANIAM KANNADASAN	
25.	U14MB250	HEMALATHA. K	

Annexure – III

SRI LAKSHMI NARAYANA INSTITUTE OF MEDICAL SCIENCES

COPD AND AIR POLLUTION

SHORT NOTES

Course Code: IM03

Name of the student:

WRITE SHORT NOTES ON THE FOLLOWING:

1. Define COPD
2. Briefly describe the pathogenesis
3. What are the indoor and outdoor air pollutants that can worsen the disease process in a patient with COPD?
4. The effect of air pollution on management of patients with COPD

SRI LAKSHMI NARAYANA INSTITUTE OF MEDICAL SCIENCES

Annexure - III

COPD AND AIR POLLUTION

SHORT NOTES

Course Code: IM03

8

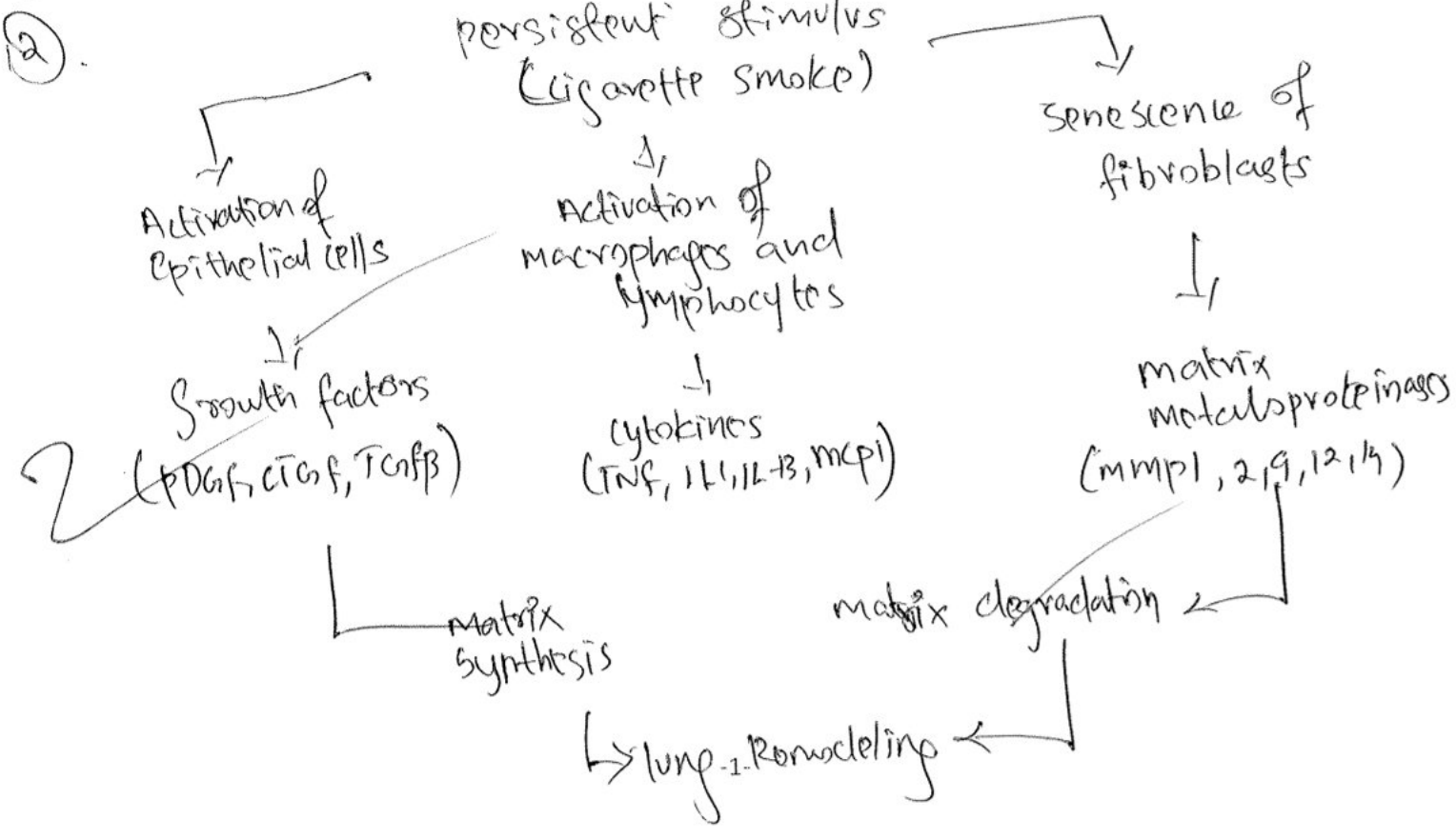
WRITE SHORT NOTES ON THE FOLLOWING:

1. Define COPD
2. Briefly describe the pathogenesis
3. What are the indoor and outdoor air pollutants that can worsen the disease process in a patient with COPD?
4. The effect of air pollution on management of patients with COPD

10 (Dr. Anand)

(1). Chronic Obstructive pulmonary disease is a disease state characterized by airflow obstruction

(2).



(3). Smoking
long term exposure of air pollution
Age
genetics

(4). Bronchodilators
metered dose inhaler
Corticosteroids
Pneumococcal vaccine.

SRI LAKSHMI NARAYANA INSTITUTE OF MEDICAL SCIENCES

Annexure - III

COPD AND AIR POLLUTION

SHORT NOTES

Course Code: IM03

WRITE SHORT NOTES ON THE FOLLOWING:

3/10

1. Define COPD
2. Briefly describe the pathogenesis
3. What are the indoor and outdoor air pollutants that can worsen the disease process in a patient with COPD?
4. The effect of air pollution on management of patients with COPD

① Copd – Chronic obstructive pulmonary Disease is a chronic lung disease, that causes obstructed air flow to lungs.

② Increased number of activated pus leukocyte & macrophage release ectase resulting in lung. Increased Oxidative Stress caused by free radicals in Cigarette smoke, the Oxidan released by phagocytes eg Pmn leukocyte lead to apoptosis or necrosis of exposed cells. Accelerated aging eg Auto Immune mechanism

③ Air Pollutants:

Outdoor air pollutants: Biological – Mold, Particle fire Chemotoxic

Tobacco smoke – Contain ligands including formaldehyde,

co-combustible pollutio – fireplaces (wood stoves), Coal, furnace

Indoor air pollutants – Asbestos, Indoor radon exposure

④ Air pollutions further worsens underlying COPD & worsens progression

ANNEXURE - IV

Sri Lakshmi Narayana Institute of Medical Sciences

Affiliated to Bharath Institute of Higher Education & Research

(Deemed to be University under section 3 of the UGC Act 1956)

CERTIFICATE OF MERIT

This is to certify that ABIRAMI.A has actively participated in the Value Added Course on 'COPD and Air pollution' conducted between July 2021-September 2021, Organized by Sri Lakshmi Narayana Institute of Medical Sciences, Pondicherry- 605 502, India.

Dr. C. Aravind
RESOURCE PERSON

Dr. Muthukumarasamy. B
COORDINATOR

ANNEXURE IV

Sri Lakshmi Narayana Institute of Medical Sciences

CERTIFICATE OF MERIT

This is to certify that ABIRAMI KAMBAN K.S has actively participated in the Value Added Course on "COPD and Air pollution" conducted between July 2021-September 2021, organized by Sri Lakshmi Narayana Institute of Medical Sciences, Pondicherry- 605 502, India.

Dr. C. Aravind
RESOURCE PERSON

Dr. C. ARAVIND, MD.,
Reg.No:68432
Professor, General Medicine
Sri Lakshmi Narayana Institute of Medical Sciences
Osudu, Kudapakkam, Puducherry-605 502.

Dr. Muthukumarasamy. B
COORDINATOR

Dr. B. MUTHUKUMARASAMY, MD.,
Professor, General Medicine
Sri Lakshmi Narayana Institute of Medical Sciences
Osudu, Kudapakkam, Puducherry-605 502

ANNEXURE -V

Student Feedback Form

Course Name: **COPD AND AIR POLLUTION**

Subject Code: **IM03**

Name of Student: Darshana. M.L Roll No.: U14MB236

We are constantly looking to improve our classes and deliver the best training to you. Your evaluations, comments and suggestions will help us to improve our performance

Sl. NO	Particulars	1	2	3	4	5
1	Objective of the course is clear				✓	
2	Course contents met with your expectations				✓	
3	Lecturer sequence was well planned					✓
4	Lectures were clear and easy to understand					✓
5	Teaching aids were effective					✓
6	Instructors encourage interaction and were helpful				✓	
7	The level of the course					✓
8	Overall rating of the course	1	2	3	4	5

**** Rating: 5 – Outstanding; 4 - Excellent; 3 – Good; 2– Satisfactory; 1 - Not-Satisfactory***

Suggestions if any:

—

Darshana M.L

Signature

Date: 29/09/21

ANNEXURE V

Student Feedback Form

Course Name: **COPD AND AIR POLLUTION**

Subject Code: **IM03**

Name of Student: Ramesh.B Roll No.: 214MB242

We are constantly looking to improve our classes and deliver the best training to you. Your evaluations, comments and suggestions will help us to improve our performance

Sl. NO	Particulars	1	2	3	4	5
1	Objective of the course is clear				✓	
2	Course contents met with your expectations					✓
3	Lecturer sequence was well planned					✓
4	Lectures were clear and easy to understand					✓
5	Teaching aids were effective				✓	
6	Instructors encourage interaction and were helpful				✓	
7	The level of the course				✓	
8	Overall rating of the course	1	2	3	4 ✓	5

**** Rating: 5 – Outstanding; 4 - Excellent; 3 – Good; 2– Satisfactory; 1 - Not-Satisfactory***

Suggestions if any:

–

Ramesh.B
Signature

Date: 29/09/21

COURSE COMPLETION LETTER

Date: 30/09/2021

From

Dr. Muthukumarsamy. B

Professor and Head,

Department of General Medicine

Sri Lakshmi Narayana Institute of Medical Sciences

Bharath Institute of Higher Education and Research

Chennai

Through Proper Channel

To

The Dean,

Sri Lakshmi Narayana Institute of Medical Sciences

Bharath Institute of Higher Education and Research

Chennai

Sub: Completion of value-added course: COPD and air pollution

Respected Madam,

With reference to the subject mentioned above, the department has conducted the value-added course titled: **"COPD and air pollution"** on 29/09/2021. We solicit your kind action to send certificates for the participants. I am also attaching the photographs captured during the conduct of the course.

Kind Regards

Dr. Muthukumarsamy. B

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Encl: Photographs