Game Changers in COPD

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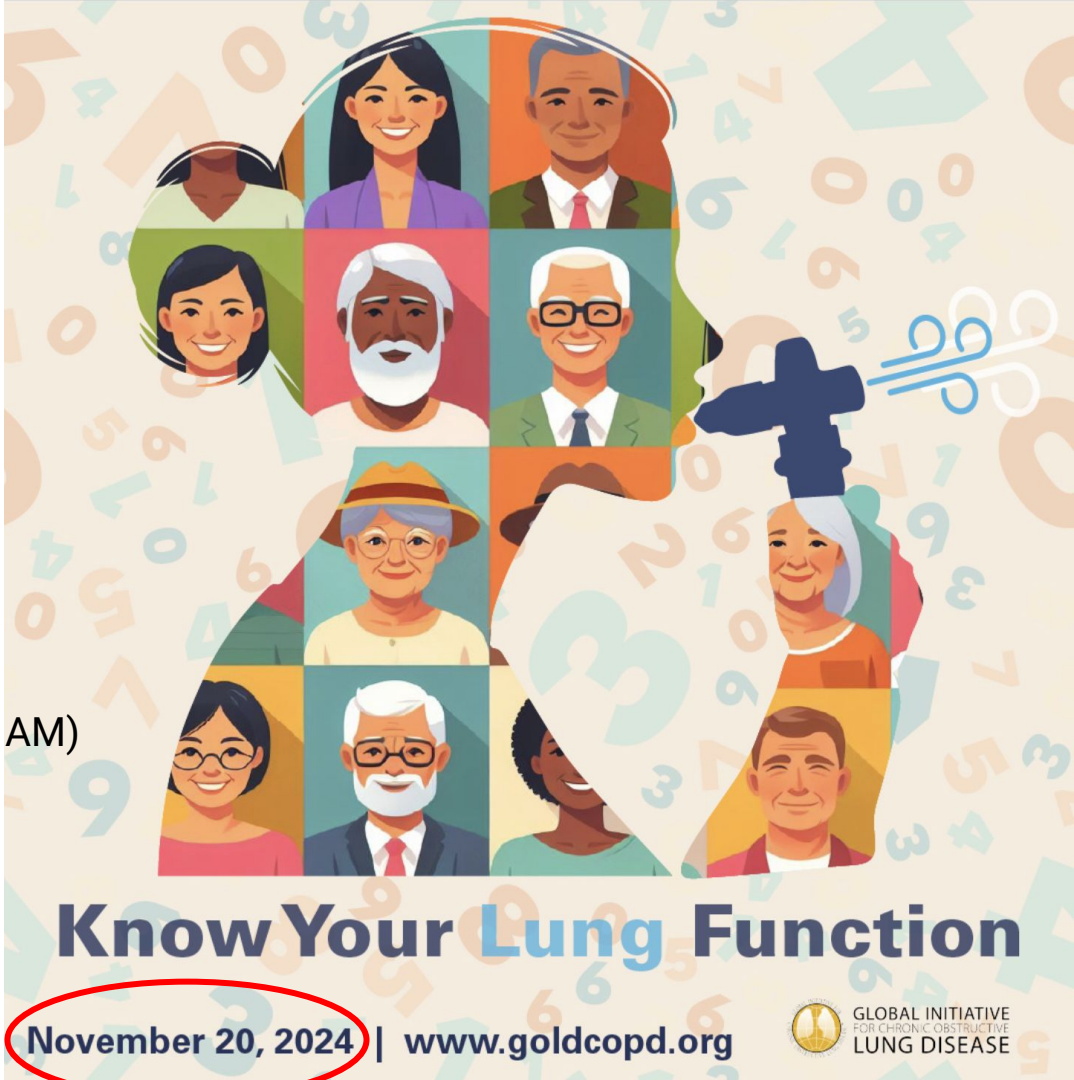
Living Better Together COPD Conference
Morning Breakout Session (11:05 AM-11:45 AM)
Chicago, IL

UI Health | UIC



Goal

Learn more about the latest major research discoveries in COPD, along with important studies that are currently in progress.

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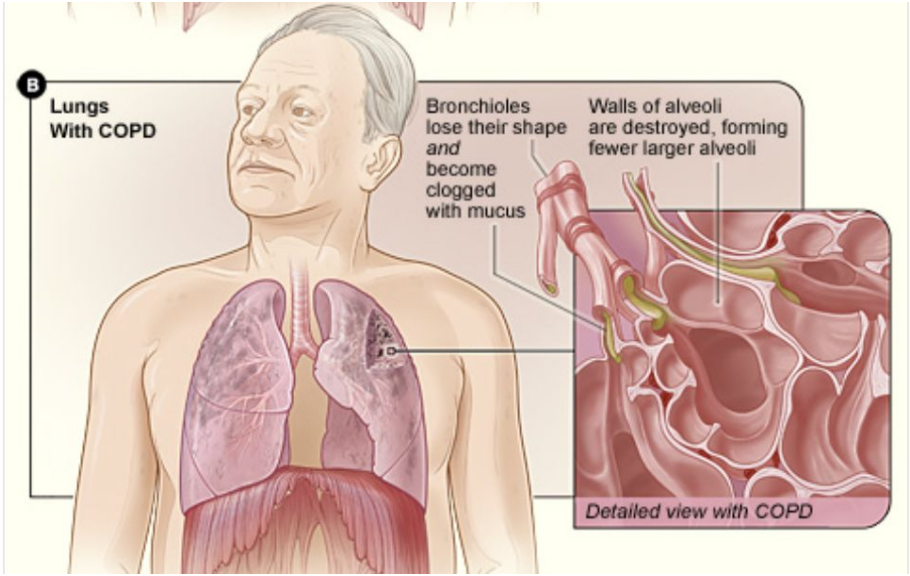
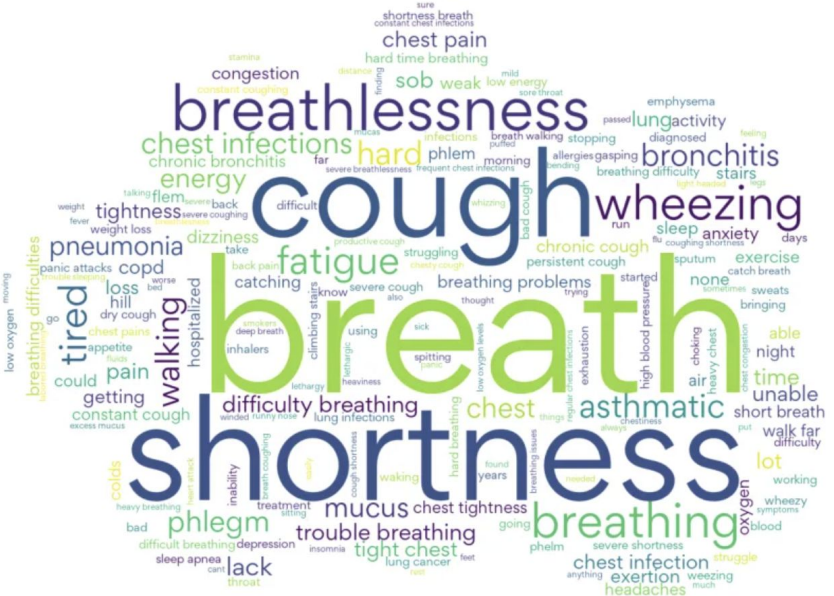
COPD: short for **C**hronic **O**bstructive **P**ulmonary **D**isease

Chronic lung disease affecting the airways (bronchioles) and air sacs (alveoli)





What causes COPD in the U.S.?

75%

Smoking cigarettes (including 2nd hand smoke).

Occupational fumes and other hazards

Air pollution

Alpha- 1-antitrypsin deficiency (genetics)

There are several proven-effective treatments for COPD that will help you breathe better and live longer

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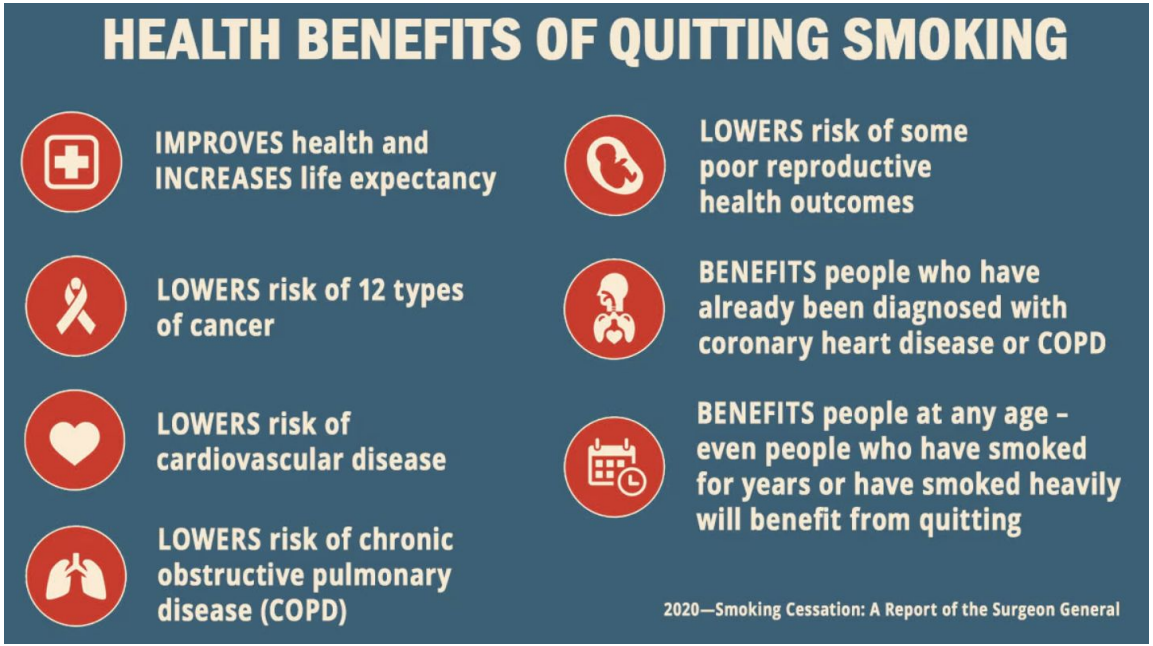
- Proven-effective treatments
    1. Lifestyle changes (smoking, vaccination, physical activity to stay fit)
    2. Pulmonary Rehabilitation (PR)
    3. Supplemental oxygen
    4. Medications
    5. Bronchoscopic lung volume reduction
    6. Surgery (e.g., bullectomy, transplantation)
- There is no cure for COPD yet

Game changer #1: Quit smoking or cut down



More tips to quit from CDC

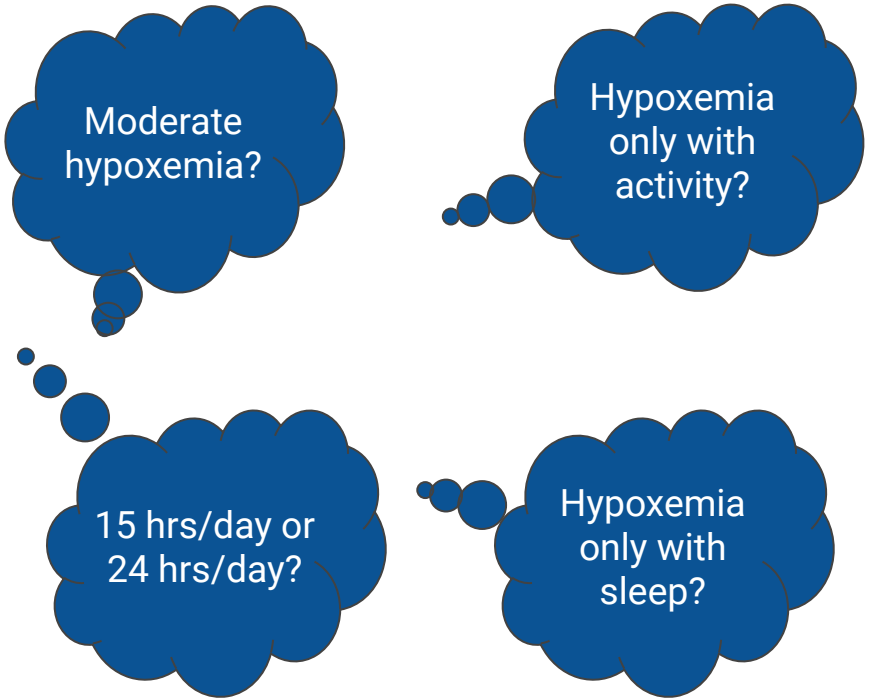
Game changer #2: Supplemental oxygen

In people with COPD and **severe, chronic resting hypoxemia**, using oxygen for **at least 15 hours** per day will help you live longer.

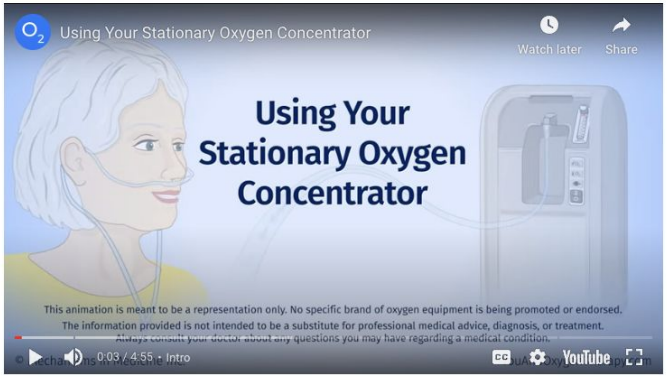
1980,1981

Game changer #2: Supplemental oxygen

In people with COPD and **severe, chronic resting hypoxemia**, using oxygen for **at least 15 hours** per day will help you live longer.



1980,1981



Animation - Using Your Stationary Oxygen Concentrator

Slide Show - Using Your Stationary Oxygen Concentrator

Animation - Using Your Stationary Oxygen Concentrator

If you have a lung problem such as **chronic obstructive pulmonary disease** (**COPD**) or **pulmonary fibrosis**, you might have low oxygen levels. If so, you may need **oxygen therapy** to help you breathe better and do the things you want and need to do. Oxygen therapy is given using special equipment. This animation tells you about **using a stationary oxygen concentrator**. A stationary oxygen concentrator is a machine that turns room air into oxygen. You breathe in the oxygen through a tube that connects from the machine to a device you wear in your nose or over your nose and mouth. A stationary concentrator is also called a **home** or **standard oxygen concentrator**. It stays in one place but has wheels so it can be moved inside the home. It plugs into the wall and runs on electricity. Watch to learn how stationary oxygen concentrators work, their parts, and how to use them effectively and safely. Always consult your healthcare provider if you have questions about your oxygen therapy prescription and using your oxygen equipment.

Other Modules:

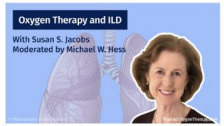
Using Your Portable Oxygen Concentrator

Using Oxygen Tanks

Using Oxygen Safely

Understanding Oxygen Therapy

Oxygen Therapy and COPD



Oxygen Therapy and ILD

Oxygen Therapy After Hospitalization

Oxygen Therapy and Healthy Living

Game changer #2: Supplemental oxygen

In people with COPD and **severe, chronic resting hypoxemia**, using oxygen for **at least 15 hours** per day will help you live longer.

- **Severe hypoxemia:** PaO2 55 mmHg or lower (SpO2 88% or lower).

1980,1981

Game changer #2: Supplemental oxygen

In people with COPD and **severe, chronic resting hypoxemia**, using oxygen for **at least 15 hours** per day will help you live longer.

- **Severe hypoxemia:** PaO2 55 mmHg or lower (SpO2 88% or lower).
- In a clinical trial, no survival benefits for **moderate hypoxemia** (SpO2 89% to 93%).

1980,1981 2016

Game changer #2: Supplemental oxygen

In people with COPD and **severe, chronic resting hypoxemia**, using oxygen for **at least 15 hours** per day will help you live longer.

- Oxygen levels measured **twice over 3 week period**

1980,1981

Game changer #2: Supplemental oxygen

In people with COPD and **severe, chronic resting hypoxemia**, using oxygen for **at least 15 hours** per day will help you live longer.

- **Resting hypoxemia:** measured when resting (e.g., sitting) and awake.

1980,1981

Game changer #2: Supplemental oxygen

In people with COPD and **severe, chronic resting hypoxemia**, using oxygen for **at least 15 hours** per day will help you live longer.

- **Resting hypoxemia:** measured when resting (e.g., sitting) and **awake**.
- In a clinical trials, no survival benefits identified if **hypoxemia only with exertion and lasts less than 1 min** (SpO2<90% for 1 min or less), or **only during sleep.**

Game changer #2: Supplemental oxygen

In people with COPD and **severe, chronic resting hypoxemia**, using oxygen for **at least 15 hours** per day will help you live longer.

- At least 15 hrs/day

1980,1981

Game changer #2: Supplemental oxygen

In people with COPD and **severe, chronic resting hypoxemia**, using oxygen for **at least 15 hours** per day will help you live longer.

- At least 15 hrs/day
- In a clinical trial, no survival benefits identified if oxygen is prescribed for **24 hrs/day compared to 15 hrs/day**

1980,1981

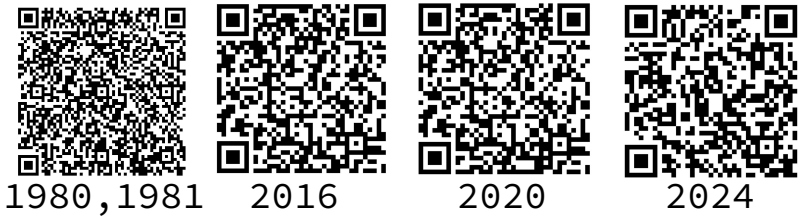
2024

Game changer #2: Supplemental oxygen

In people with COPD and **severe, chronic resting hypoxemia**, using oxygen for **at least 15 hours** per day will help you live longer.

Clinical trials have **not** been able to confirm survival benefits in **other situations.** So talk to your doctor if you are using oxygen and any of the following apply to you:

- Moderate hypoxemia at rest
- Hypoxemia only briefly during exertion
- Hypoxemia only during sleep
- Oxygen prescribed for more than 15 hrs/day



Game changer #3: Two pills that prevent COPD exacerbations

	Long-term **azithromycin**	Long-term **roflumilast** (among those with chronic bronchitis)
Reduces risk of COPD exacerbations?	Yes	Yes
Participants, N	1,234 in clinical trials	7,390 in clinical trials
Clinical trials	Albert R. MACRO. NEJM 2011 Uzun S. COLUMBUS. Lancet Resp Med 2014	Martinez F. RE2SPOND. AJRCCM 2016 Martinez F. REACT. Lancet 2015 Calverley PMA. M2-124 + M2-125. Lancet 2009.
Recommended by guidelines	Yes	Yes
FDA-approved	Yes, as an antibiotic	Yes, to reduce COPD exacerbations

But, pulmonologists don't know which pill is better to prevent COPD exacerbations

Which is more effective in COPD associated with chronic bronchitis?

n=43 pulmonologists

30% azithromycin

9% roflumilast

16% equally

44% do not know

Krishnan JA et al. ATS 2016 abstract (poster discussion)

RELIANCE

RofLumilast or Azithromycin to preveNT COPD Exacerbations
NCT04069312
PCORI Contract # PCS-1504-30430

RELIANCE is developing Real-World Evidence to inform COPD care

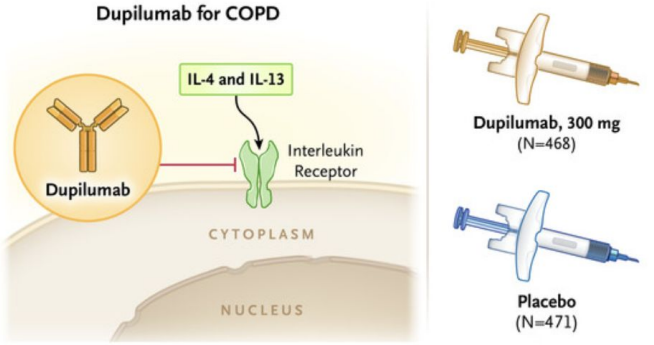
RELIANCE is a multi-site, nationwide clinical research consortium funded by the Patient-Centered Outcomes Research Institute (PCORI) to compare the real-world effectiveness of long-term oral roflumilast vs. azithromycin to prevent COPD readmissions and mortality after hospital discharge.

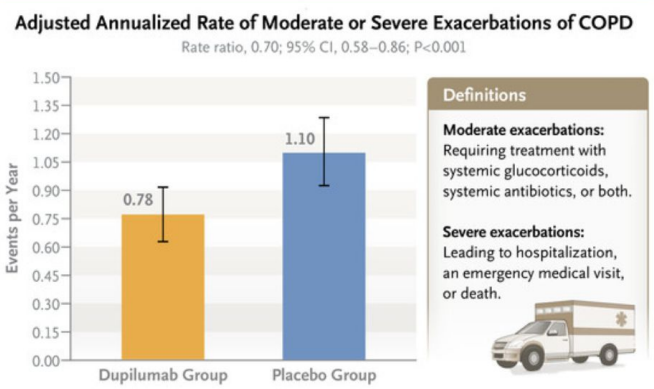
To learn more about how you and your doctor can join us to find out which drug is better, talk to: **Lourdes Norwick, Jocelyn Flores, Nina Bracken**, or contact us at: **reliance@uic.edu.**

Game changer #4: Dupilumab, first biologic approved by FDA for COPD

In patients with COPD and **elevated blood eosinophil count** (more than 300 cells/uL), dupilumab injections every 2 weeks reduced the risk of COPD exacerbations compared to placebo.

Dupilumab was approved by the FDA in June 2024. The harms / benefits of dupilumab versus alternatives (roflumilast, azithromycin) have not been evaluated.





Safety and benefits unproven or known to be unsafe

- Other biologics (results of well-designed studies not yet available)
- Stem cells (results of well-designed studies not yet available)
- Chronic daily oral steroids (unsafe)

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- There is no cure for COPD yet
- Proven-effective treatments

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3. **Supplemental oxygen**
4. **Medications (roflumilast, azithromycin, dupilumab)**
5. Bronchoscopic lung volume reduction
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Questions?

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