

## Effects of Temperature and Humidity on Symptoms, Quality of Life, and Physical Activity in Individuals with COPD

### Consent to Participate

\* 1. Do you consent to participate in this study?

Yes

No

\* 2. Do you agree to have your responses used for secondary research purposes?

Yes

No

## Effects of Temperature and Humidity on Symptoms, Quality of Life, and Physical Activity in Individuals with COPD

### Moderate Temperature and Humidity

This section will ask you to think back about your symptoms, physical activity, and background health history during a *moderate temperature around 14-21°C and approximately 30-50% relative humidity*.



**Effects of Temperature and Humidity on Symptoms, Quality of Life, and Physical Activity in Individuals with COPD**  
Symptoms: Moderate Temperature and Humidity

3. Think back about your symptoms during moderate conditions and rank them on a scale from 0-5.

0 meaning you do not experience these symptoms at all  
5 meaning you experience them all the time

	0	1	2	3	4	5
How often do you cough?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often do you have mucus in your chest?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How tight does your chest feel?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How breathless are you walking up a hill or one flight of stairs?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How limited are you doing your activities at home?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How sound do you sleep at night?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How much energy do you have?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Effects of Temperature and Humidity on Symptoms, Quality of Life, and Physical Activity in Individuals with COPD

### Physical Activity: Moderate Temperature and Humidity

**4. Think back to your level of physical activity during moderate conditions on an average day.**

	None at all	Rarely	Sometimes	Frequently	All the time
How often did you walk outside?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often did you do chores outside of the house?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How much difficulty did you have getting dressed?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often did you avoid doing activities because of your lung problems?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How breathless were you in general during your activities?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How tired were you in general during your activities?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often did you have to take breaks during your physical activities?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Effects of Temperature and Humidity on Symptoms, Quality of Life, and Physical Activity in Individuals with COPD**  
**Background Health History: Moderate Temperature and Humidity**

5. How often do you experience exacerbations during moderate conditions?

- 3 or more times per day
- 1 or 2 times per day
- 2 or 3 times per week
- Once a week or less
- Not at all
- I don't know

6. If you use a rescue inhaler, how often do you use your rescue inhaler during moderate conditions?

- 3 or more times per day
- 1 or 2 times per day
- 2 or 3 times per week
- Once a week or less
- Not at all
- I don't know

7. How many times did you visit your family doctor during moderate conditions?

- 0-1
- 2-3
- 4-5
- More than 5 times
- I don't know

**8. How many times did you visit your respiratory specialist during moderate conditions?**

- 0-1
- 2-3
- 4-5
- More than 5 times
- I don't know

**9. How many times did you visit the emergency department at the hospital during moderate conditions?**

- 0-1
- 2-3
- 4-5
- More than 5 times
- I don't know

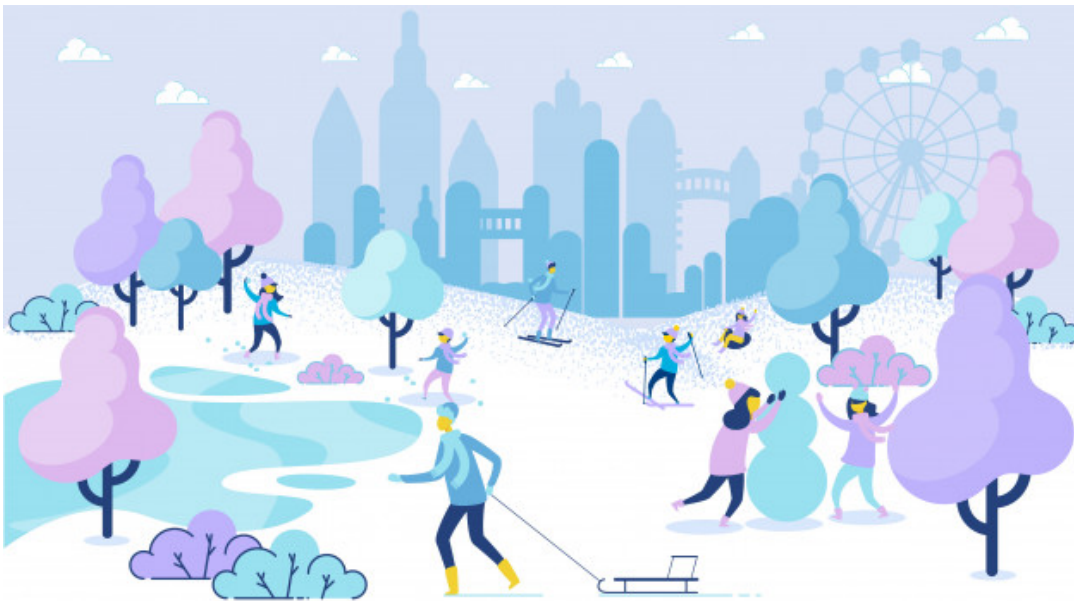
**10. How many times were you admitted to the hospital during moderate conditions?**

- 0-1
- 2-3
- 4-5
- More than 5 times
- I don't know

## Effects of Temperature and Humidity on Symptoms, Quality of Life, and Physical Activity in Individuals with COPD

### Cold Temperature and Dry Humidity

This section will ask you to think back about your symptoms, physical activity, and background health history during *cold temperatures of less than 5°C and below 30% relative humidity*.



## Effects of Temperature and Humidity on Symptoms, Quality of Life, and Physical Activity in Individuals with COPD

### Symptoms: Cold Temperature and Dry Humidity

11. Think back about your symptoms during cold and dry conditions and rank them on a scale from 0-5.

0 meaning you do not experience these symptoms at all  
5 meaning you experience them all the time

	0	1	2	3	4	5
How often do you cough?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often do you have mucus in your chest?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How tight does your chest feel?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How breathless are you walking up a hill or one flight of stairs?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How limited are you doing your activities at home?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How sound do you sleep at night?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How much energy do you have?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Effects of Temperature and Humidity on Symptoms, Quality of Life, and Physical Activity in Individuals with COPD

### Physical Activity: Cold Temperature and Dry Humidity



**12. Think back to your level of physical activity during cold and dry conditions on an average day.**

	None at all	Rarely	Sometimes	Frequently	All the time
How often did you walk outside?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often did you do chores outside of the house?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How much difficulty did you have getting dressed?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often did you avoid doing activities because of your lung problems?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How breathless were you in general during your activities?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How tired were you in general during your activities?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often did you have to take breaks during your physical activities?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Effects of Temperature and Humidity on Symptoms, Quality of Life, and Physical Activity in Individuals with COPD

Background Health History: Cold Temperature and Dry Humidity

**13. How often do you experience exacerbations during cold and dry conditions?**

- 3 or more times per day
- 1 or 2 times per day
- 2 or 3 times per week
- Once a week or less
- Not at all
- I don't know

**14. If you use a rescue inhaler, how often do you use your rescue inhaler during cold and dry conditions?**

- 3 or more times per day
- 1 or 2 times per day
- 2 or 3 times per week
- Once a week or less
- Not at all
- I don't know

**15. How many times did you visit your family doctor during cold and dry conditions?**

- 0-1
- 2-3
- 4-5
- More than 5 times
- I don't know

**16. How many times did you visit your respiratory specialist during cold and dry conditions?**

- 0-1
- 2-3
- 4-5
- More than 5 times
- I don't know

**17. How many times did you visit the emergency department at the hospital during cold and dry conditions?**

- 0-1
- 2-3
- 4-5
- More than 5 times
- I don't know

**18. How many times were you admitted to the hospital during cold and dry conditions?**

- 0-1
- 2-3
- 4-5
- More than 5 times
- I don't know

## Effects of Temperature and Humidity on Symptoms, Quality of Life, and Physical Activity in Individuals with COPD

### Hot Temperature and Humid Conditions

This section will ask you to think back about your symptoms, physical activity, and background health history during *hot temperatures of higher than 25°C and above 50% relative humidity*.



## Effects of Temperature and Humidity on Symptoms, Quality of Life, and Physical Activity in Individuals with COPD

### Symptoms: Hot Temperature and Humid Conditions

19. Think back about your symptoms during hot and humid conditions and rank them on a scale from 0-5.

0 meaning you do not experience these symptoms at all  
5 meaning you experience them all the time

	0	1	2	3	4	5
How often do you cough?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often do you have mucus in your chest?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How tight does your chest feel?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How breathless are you walking up a hill or one flight of stairs?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How limited are you doing your activities at home?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How sound do you sleep at night?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How much energy do you have?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Effects of Temperature and Humidity on Symptoms, Quality of Life, and Physical Activity in Individuals with COPD

### Physical Activity: Hot Temperature and Humid Conditions

20. Think back to your level of physical activity during hot and humid conditions on an average day.

	None at all	Rarely	Sometimes	Frequently	All the time
How often did you walk outside?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often did you do chores outside of the house?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How much difficulty did you have getting dressed?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often did you avoid doing activities because of your lung problems?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How breathless were you in general during your activities?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How tired were you in general during your activities?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often did you have to take breaks during your physical activities?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Effects of Temperature and Humidity on Symptoms, Quality of Life, and Physical Activity in Individuals with COPD**  
**Background Health History: Hot Temperature and Humid Conditions**

**21. How often do you experience exacerbations during hot and humid conditions?**

- 3 or more times per day
- 1 or 2 times per day
- 2 or 3 times per week
- Once a week or less
- Not at all
- I don't know

**22. If you use a rescue inhaler, how often do you use your rescue inhaler during hot and humid conditions?**

- 3 or more times per day
- 1 or 2 times per day
- 2 or 3 times per week
- Once a week or less
- Not at all
- I don't know

**23. How many times did you visit your family doctor during hot and humid conditions?**

- 0-1
- 2-3
- 4-5
- More than 5 times
- I don't know

**24. How many times did you visit your respiratory specialist during hot and humid conditions?**

- 0-1
- 2-3
- 4-5
- More than 5 times
- I don't know

**25. How many times did you visit the emergency department at the hospital during hot and humid conditions?**

- 0-1
- 2-3
- 4-5
- More than 5 times
- I don't know

**26. How many times were you admitted to the hospital during hot and humid conditions?**

- 0-1
- 2-3
- 4-5
- More than 5 times
- I don't know



# Effects of Temperature and Humidity on Symptoms, Quality of Life, and Physical Activity in Individuals with COPD

## Demographics

27. How old are you today? Please state your answer as a number.

28. What is your biological sex?

- Male
- Female
- Other

29. In what type of community do you live?

- City or urban community
- Suburban community
- Rural community
- I don't know
- Other (please specify)

**30. What was your primary respiratory diagnosis?**

- |  |  |
|--|--|
| <input type="checkbox"/> Asthma  | <input type="checkbox"/> Lung Cancer     |
| <input type="checkbox"/> Chronic Obstructive Pulmonary Disorder (COPD) | <input type="checkbox"/> Cystic Fibrosis |
| <input type="checkbox"/> Chronic Bronchitis                            | <input type="checkbox"/> Pneumonia       |
| <input type="checkbox"/> Emphysema                                     | <input type="checkbox"/> I don't know    |

Other (please specify)

**31. When was your diagnosis date? If you do not remember the exact date, you can give an approximation.**

Date

Date

MM/DD/YYYY

### 32. What respiratory medication(s) do you use?

- |  |   |
|--|---|
| <input type="checkbox"/> Short-acting Bronchodilator Inhalers (E.g., Atrovent, Airomir, Bricanyl Turbuhaler, Ventolin)   | <input type="checkbox"/> Antibiotics                    |
|  | <input type="checkbox"/> Phosphodiesterase-4 Inhibitors |
| <input type="checkbox"/> Long-acting Bronchodilator Inhalers (E.g., Incruse Ellipta, Seebri Breezhaler, Spiriva Handihaler)  | <input type="checkbox"/> Mucolytics                     |
|  | <input type="checkbox"/> I don't know                   |
| <input type="checkbox"/> Combination Inhalers (E.g., Combivent Respimat, Advair Diskus, Breo Ellipta, Symbicort Turbuhaler, Anoro Ellipta, Duaklir Genuair, Inspiolto Respimat, Ultibro Breezhaler, Trelegy Ellipta) |   |
| <input type="checkbox"/> Nebulizer (a device that turns medication into fine mist using mouthpiece/mask)   |   |
| <input type="checkbox"/> Corticosteroid pills  |   |

Other (please specify)

### 33. Do you have a history of any of the following?

- |   |   |
|---|---|
| <input type="checkbox"/> Cardiovascular diseases (Eg. Hypertension)           | <input type="checkbox"/> Neurological disorders (Eg. Alzheimer's disease, Dementia) |
| <input type="checkbox"/> Coronary heart disease                               | <input type="checkbox"/> Respiratory diseases (Other than COPD)                     |
| <input type="checkbox"/> Diabetes   | <input type="checkbox"/> I don't know   |
| <input type="checkbox"/> Musculoskeletal disorders                            | <input type="checkbox"/> Not applicable   |
| <input type="checkbox"/> Neuropsychiatric disorders (Eg. Anxiety, Depression) |   |

Other (please specify)

34. Do you have a smoking history?

- Current smoker
- Former smoker
- Never smoked
- Prefer not to answer

## Effects of Temperature and Humidity on Symptoms, Quality of Life, and Physical Activity in Individuals with COPD

35. How often do you smoke?

- Every day
- A few times per week
- Once a week
- A few times per month
- Once a month
- Occasionally
- I don't know
- Prefer not to answer

36. How long have you been smoking?

- Less than 1 year
- 1-5 years
- 6-10 years
- 11-15 years
- 16-20 years
- Greater than 20 years
- I don't know
- Prefer not to answer

## Effects of Temperature and Humidity on Symptoms, Quality of Life, and Physical Activity in Individuals with COPD

Thank you for taking the time to complete this survey!

**37. Please let us know if you have any comments or feedback for the survey. Your participation was much appreciated.**

