

# **Illness from Air Pollution**

# **Air Quality**

- **We live in a stressed airshed**
- **Health effects due to air pollution are occurring**
- **Air Quality Index is misleading and must be changed**
- **Issue for all levels of government**

- **AQI measures**
  - **ozone**
  - **Particulates (TSP)**
  - **sulphates**
  - **Nitrogen dioxide**
  - **sulphur dioxide**
  - **carbon monoxide**

# AQI

| <b>AQI Scale</b> | <b>Category</b>  |
|------------------|------------------|
| <b>0 - 15</b>    | <b>Very Good</b> |
| <b>16 - 31</b>   | <b>Good</b>      |
| <b>32 - 49</b>   | <b>Moderate</b>  |
| <b>50 - 99</b>   | <b>Poor</b>      |
| <b>100+</b>      | <b>Very Poor</b> |

**Air quality Advisory issued when AQI is 50**

**BUT**

**No threshold of health effects**

**Look at health effects, not  
thresholds**

**Focus on ambient  
concentrations rather than  
emission data**

# Illness due to Air Pollution

| <b>Premature Death</b>     | <b>Total Deaths</b> | <b>Air Pollution Deaths</b> |
|----------------------------|---------------------|-----------------------------|
| <b>Respiratory Disease</b> | <b>131</b>          | <b>17</b>                   |
| <b>Cardiovascular</b>      | <b>718</b>          | <b>38</b>                   |
| <b>Total</b>               | <b>849</b>          | <b>55 (6%)</b>              |

# Illness due to Air Pollution

| <b>Hospital Admission</b>       | <b>Total Admissions</b> | <b>Air Pollution Admissions</b> |
|---------------------------------|-------------------------|---------------------------------|
| <b>Asthma (all ages)</b>        | <b>296</b>              | <b>37</b>                       |
| <b>Asthma (0-17)</b>            | <b>183</b>              | <b>7</b>                        |
| <b>COPD</b>                     | <b>559</b>              | <b>87</b>                       |
| <b>Pneumonia (all ages)</b>     | <b>774</b>              | <b>106</b>                      |
| <b>Pneumonia (0-17)</b>         | <b>166</b>              | <b>21</b>                       |
| <b>Dysrhythmia</b>              | <b>615</b>              | <b>70</b>                       |
| <b>Congestive Heart Failure</b> | <b>609</b>              | <b>100</b>                      |

## Deaths in Halton

| Cause of Death                             | Number of Deaths |
|--|------------------|
| Acute Myocardial Infarction (Heart Attack) | 175              |
| Stroke                                     | 136              |
| Lung Cancer                                | 136              |
| Breast Cancer                              | 68               |
| Chronic Obstructive Lung Disease           | 61               |
| Pneumonia                                  | 45               |
| Colon Cancer                               | 42               |
| Falls                                      | 39               |
| Prostate Cancer                            | 39               |
| Diabetes                                   | 37               |
| Suicide                                    | 22               |
| Motor Vehicle Traffic Collisions           | 20               |



## Deaths in Halton

| <b>Cause of Death</b> | <b>Number of Deaths</b> | <b>Cause</b>             | <b>Number of Deaths</b> |
|-----------------------|-------------------------|--------------------------|-------------------------|
| <b>Heart Attack</b>   | <b>175</b>              | <b>Tobacco</b>           | <b>350</b>              |
| <b>Stroke</b>         | <b>136</b>              |                          |                         |
| <b>Lung Cancer</b>    | <b>136</b>              |                          |                         |
| <b>Breast</b>         | <b>68</b>               |                          |                         |
| <b>COPD</b>           | <b>61</b>               | <b>Air Pollution</b>     | <b>55</b>               |
| <b>Pneumonia</b>      | <b>45</b>               |                          |                         |
| <b>Colon Cancer</b>   | <b>42</b>               |                          |                         |
| <b>Falls</b>          | <b>39</b>               |                          |                         |
| <b>Prostate</b>       | <b>39</b>               |                          |                         |
| <b>Diabetes</b>       | <b>37</b>               | <b>Second Hand Smoke</b> | <b>12 - 70</b>          |
| <b>Suicide</b>        | <b>22</b>               |                          |                         |
| <b>MVTC</b>           | <b>20</b>               |                          |                         |

# **Issue for all levels of Government**

- **Land use and air quality**
- **Community Health Impact Assessment**
- **Need for co-ordinated, comprehensive action**

# Strategic Plan

**Action - Create and apply a Community Health Impact Assessment, to ensure that an assessment of health impacts is part of our planning process (for all proposed developments)**

# Community Health Impact Assessment

- **Practical understanding of scope of CHIA and its applicability to the development process.**
- **How would this assessment tool relate specifically to air quality?**
- **Staff will develop a framework to present back to Council.**

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# Urban forest management strategies and air quality

- **temperature reduction**
- **removal of air pollutants**
- **emission of volatile organic compounds and tree maintenance emissions**
- **energy effect on buildings**

# **Air quality effects impacted by:**

**Meteorology**

**trees type**

**tree canopy**

**leaf area density**

**type of pollution**

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