

# ASTHMA

## CONNECTION

# OBESITY



Obese individuals are 92% more likely to develop asthma than lean individuals.<sup>10</sup>

- ▶ Severe asthmatics are more likely to be obese.<sup>18</sup>
- ▶ Obese individuals with asthma are less responsive to controller medication, and have increased hospital visits due to asthma.<sup>6</sup>



*Weight Loss* in adults with asthma lowers the amount of asthma medication needed and improves quality of life.<sup>11</sup> In some cases weight loss can even resolve asthma.<sup>11</sup>

We don't know why obesity is associated with asthma, but scientists have a couple of theories:



- ▶ Obesity, especially in those with excess belly fat, can decrease the amount of air in the lungs at the end of a breath. This change could increase asthma symptoms and make asthma more difficult to treat.<sup>14</sup>
- ▶ Obesity alters the immune system which may increase asthma severity.<sup>16</sup>

### ENVIRONMENT

Obesity can increase respiratory response to air pollutants, including pollutants that trigger asthmatic attacks.<sup>13</sup>



### DIET

The mother's diet while pregnant, and the diet of the infant impact future risk for developing asthma and obesity.<sup>15</sup>



## OBESITY ASTHMA

### GENES

Individuals may be at increased risk for developing both asthma and obesity depending on which genes they have.<sup>12</sup>



**HARVARD  
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Department of Environmental Health

Making small changes in your life now can have big impacts on your future disease risk.

Visit our website for resources on asthma and obesity prevention to help you get started.  
[www.hsph.harvard.edu/niehs/community-outreach/asthma-obesity-connection/](http://www.hsph.harvard.edu/niehs/community-outreach/asthma-obesity-connection/)

# ASTHMA

Asthma is a disease in which the airways narrow, making breathing difficult. Asthma can lead to episodes of coughing, wheezing, and shortness of breath that can resolve by themselves or with medication.

- ▶ In 2009 about 1 in 10 children (10%) and 1 in 12 adults (8%) had asthma in the US. <sup>1</sup>
- ▶ Dorchester has much higher rates of asthma compared to the total Boston population (18% vs 11%, respectively).<sup>17</sup>
- ▶ A number of lifestyle factors and environmental triggers can increase risk for developing asthma including:
  - Being overweight or obese<sup>6</sup>
  - Living in an urban environment<sup>2</sup>
  - Exposure to:
    - Air Pollution<sup>3</sup>
    - House Dust<sup>4</sup>
    - Tobacco Smoke<sup>5</sup>

# OBESITY

Obesity is an excess of fatty tissue in the body.

- ▶ The number of people who are obese has grown considerably in recent years.
  - More than 1/3 of adults in the U.S. are obese.<sup>7</sup>
  - An additional 1/3 are overweight.<sup>8</sup>
  - Nearly 1/5 of children are obese.<sup>8</sup>
- ▶ Dorchester has much higher rates of obesity compared to the total Boston population (31% vs 21%, respectively).<sup>17</sup>
- ▶ Obesity increases risk for the development of a number of diseases including:
  - Cardiovascular Disease<sup>7</sup>
  - Stroke<sup>7</sup>
  - Some forms of Cancer<sup>7</sup>
  - Diabetes<sup>7</sup>
  - Asthma<sup>6</sup>

## ASTHMA OBESITY CONNECTION

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