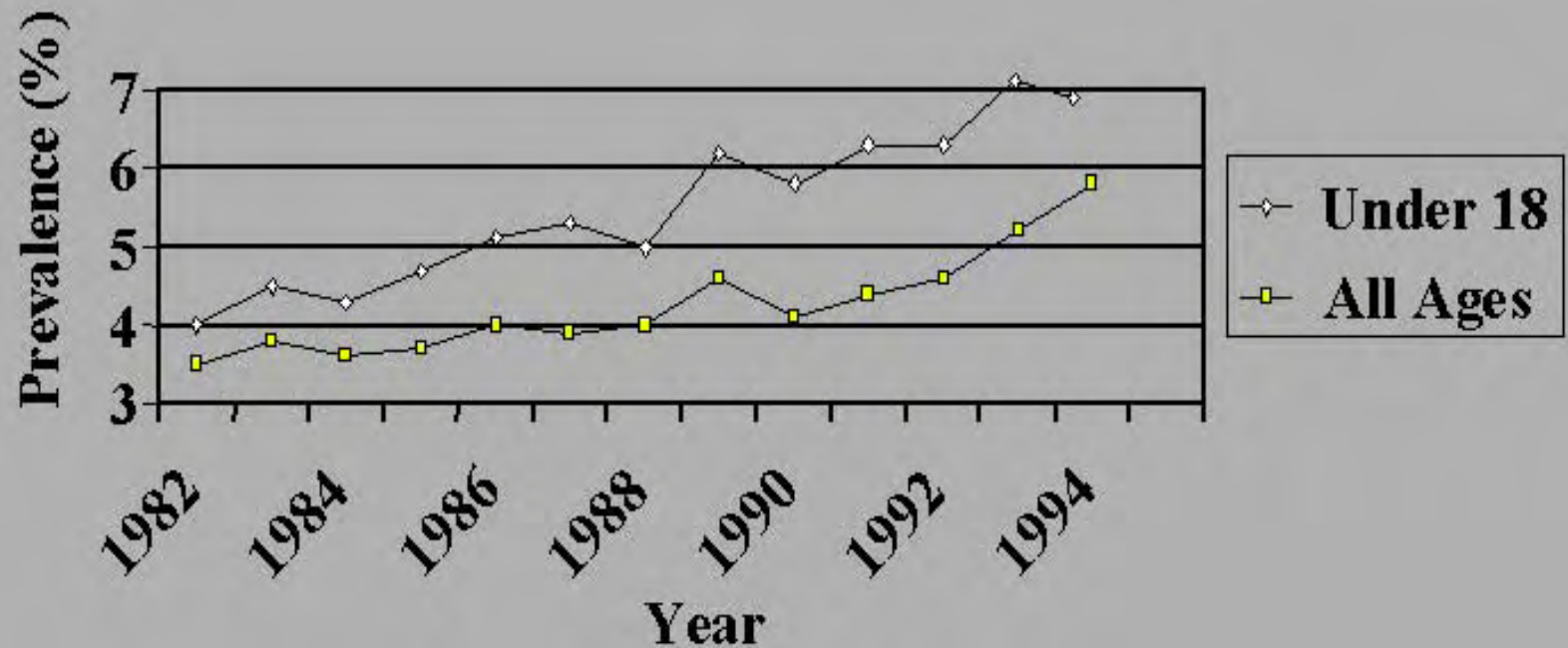




What is Asthma?

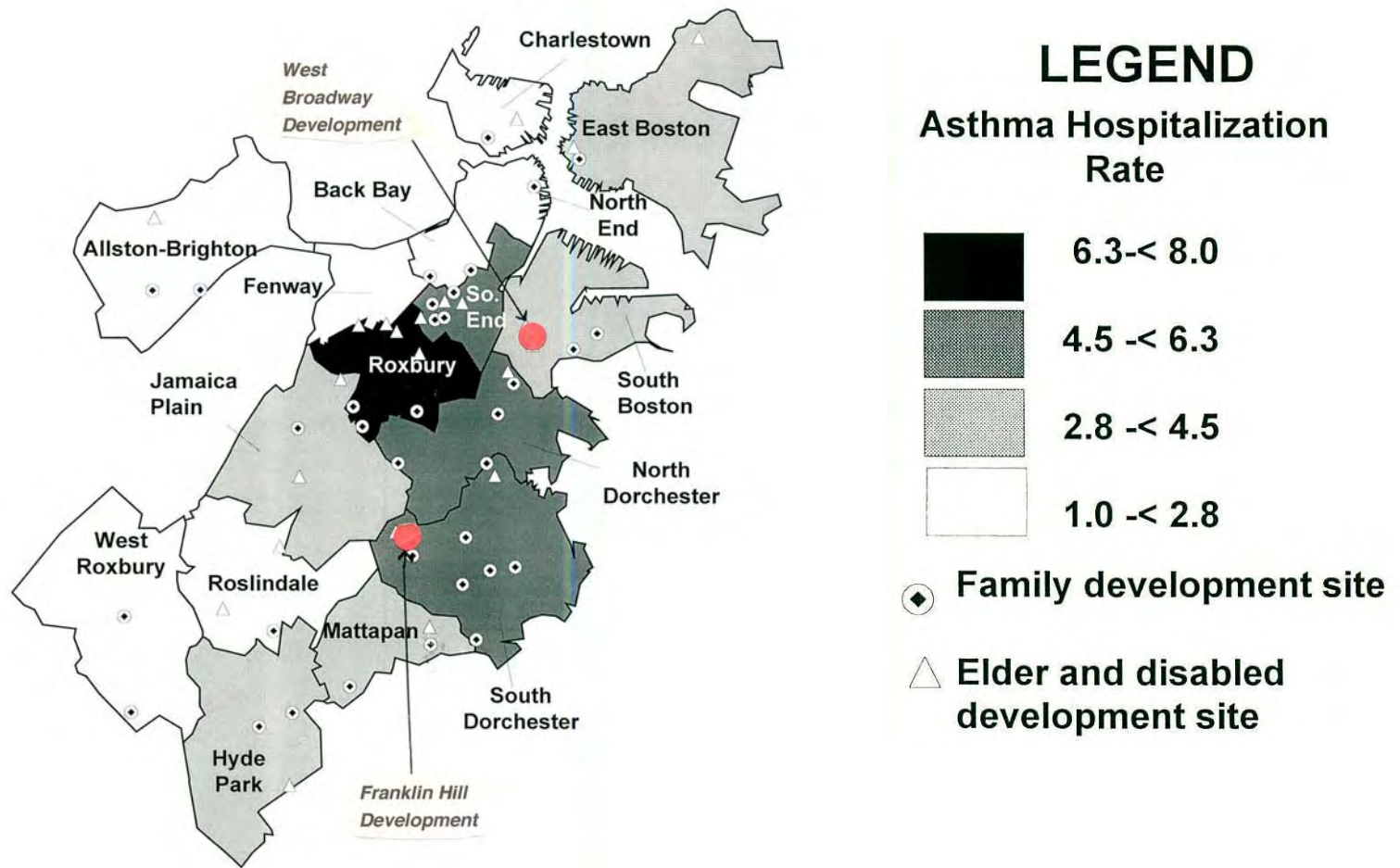
- Asthma makes airways narrower than normal and thus breathing is more difficult
- During an asthma attack, extra mucous clogs up the breathing tubes, the tubes swell and the muscles tighten to decrease the amount of air that can get through
- It is a chronic condition—this means it is long term and people live with it everyday

Asthma is Increasing

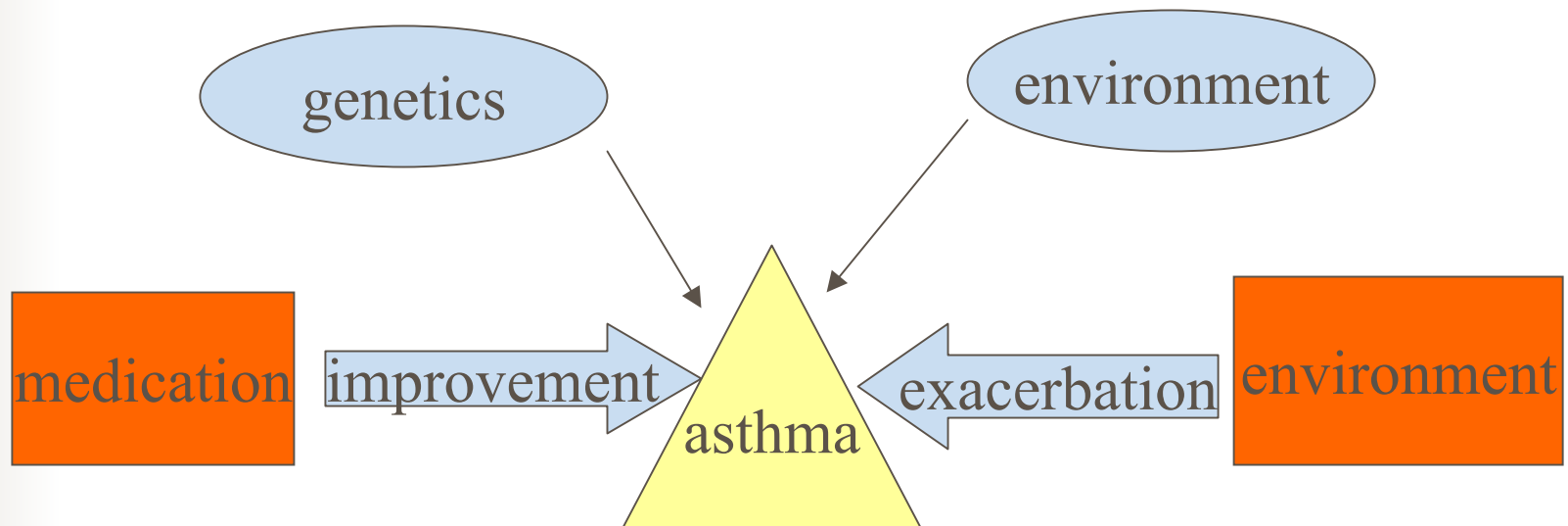


National Health Interview Survey

Asthma Hospitalizations, Boston



Primary Prevention of Asthma





Nutrition and asthma

- Diet may have both protective and adverse effects on asthma—this means it can prevent asthma or make it worse, depending upon the food
- There are many confounding factors that make it hard to say for sure that certain foods can help prevent asthma. These include: age, sex, lifestyle factors (such as smoking), genetics, body type
- The following slides will describe what scientists *believe* the relationships to be between foods and asthma



Foods that may protect against (prevent) asthma

- Hard fruits such as apples and pears
 - These foods have antioxidants that help reduce the swelling of the breathing tubes and thus allow for more air to move through
- Fatty fish
 - Fatty fish such as salmon have a fat that may reduce how sensitive one is to substances that cause asthma



Foods that may make asthma worse

- Excess sodium (salt)
 - Eating too much salt may make one more sensitive and reactive to allergens. Swelling may increase and make the tubes more narrow
- Some types of high-fat dairy products
 - Proteins in dairy products may induce allergic reactions and trigger asthma attacks



Indoor Environment Factors

Biological

- Bacteria/Viruses
- Cockroaches
- Dust mites
- Mold
- Pets
- Pollen
- Rodents

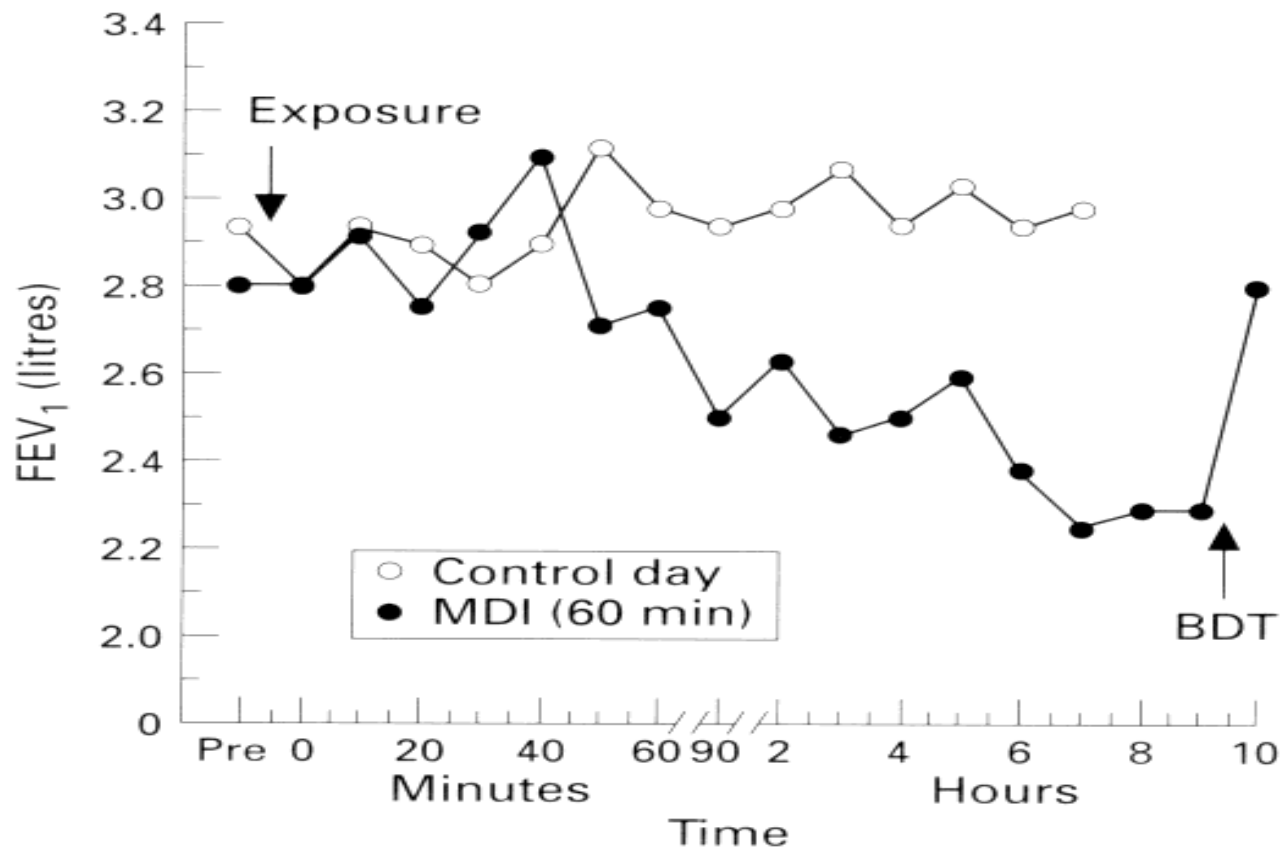
Chemical

- Tobacco smoke
- Building materials
- Carpet/furniture
- Combustion from stove/heater/etc...
- Household chemicals
- Pesticides

Structural

- Water/moisture
- Heating ventilation & air conditioning
- Deteriorated buildings
- Appliance disrepair
- Old carpet/upholstery

A Chemical Affects Breathing





Franklin Hill Survey I

- 62 % reported moisture and leaks
- 43% smelled or saw mold growth
- 70% had cockroaches in apartment
- 40% had mice or rats in apartment
- 38% used oven to heat apartment
- 66% reported stuffy air
- 73% experienced overheating in apartment
- 35% of respondents smoked
- 57% of households had at least one smoker

Mold





Franklin Hill Survey II

- Respondent asthma rate = 40% (n=53)
- Child asthma rate = 56% (n=61)
- 40% of respondents reported wheezing in the last month (n=53)
- 48% of respondents reported cough (n=53)
- 48% of respondents reported sneeze (n=53)



Franklin Hill Survey III

Significant associations between:

- Moisture & Wheeze
- Sewage & Wheeze
- Odor & Wheeze
- Cracks & Wheeze
- Renovations & Wheeze

Franklin Hill Participants





Summary

- Sources of asthma exacerbation are numerous and widespread.
- There is likely no single “smoking gun”
- Solutions will need to be multifactoral.
- Lots of people in public housing have asthma.
- The environmental factors in public of greatest concern appear to be overheating, fungi, cockroaches, mice, smoking and NO₂