

## NON-COMMUNICABLE DISEASES & CONDITIONS ASSOC. W/ENVIRONMENT

### Facts

Major non-communicable diseases in the U.S.:

- Diseases of the heart
- Malignant neoplasms (cancer)
- Cerebrovascular diseases (stroke)
- Accidents
- Atherosclerosis
- Diabetes mellitus
- Chronic liver disease and cirrhosis

Chemical compounds:

- 2 million recognized compounds
- 60,000 chemical substances in past or present commercial use
- 600–700 new chemicals introduced each year
- 15,000 have been animal tested with published reports
- Limited resources permit testing of no more than 500 chemicals per year

Lead:

- Lead poisoning is commonly associated with children living in old and substandard housing built before 1950
- Banned from house paint in 1978
- National ambient air quality standard for airborne lead is  $1.5 \mu\text{g}/\text{m}^3$  averaged over a 3-month period
- **There is no acceptable level of lead in humans**, but CDC guideline for blood level is  $10 \mu\text{g}/\text{dl}$

Carbon monoxide:

- Motor vehicle exhausts are the principal source of carbon monoxide air pollution
- Room space heaters are a major potential hazard indoors
- Cigarette smoke is also a significant source of carbon monoxide to the smoker
- Homes in low socioeconomic areas can be expected to have the highest levels
- Concentrations of 70–100 ppm are not unusual in city traffic

Nitrates:

- Presence of  $>45\text{mg}/\text{l}$  nitrates, the standard for drinking water, appears to be the cause of methemoglobinemia (“blue baby”).