



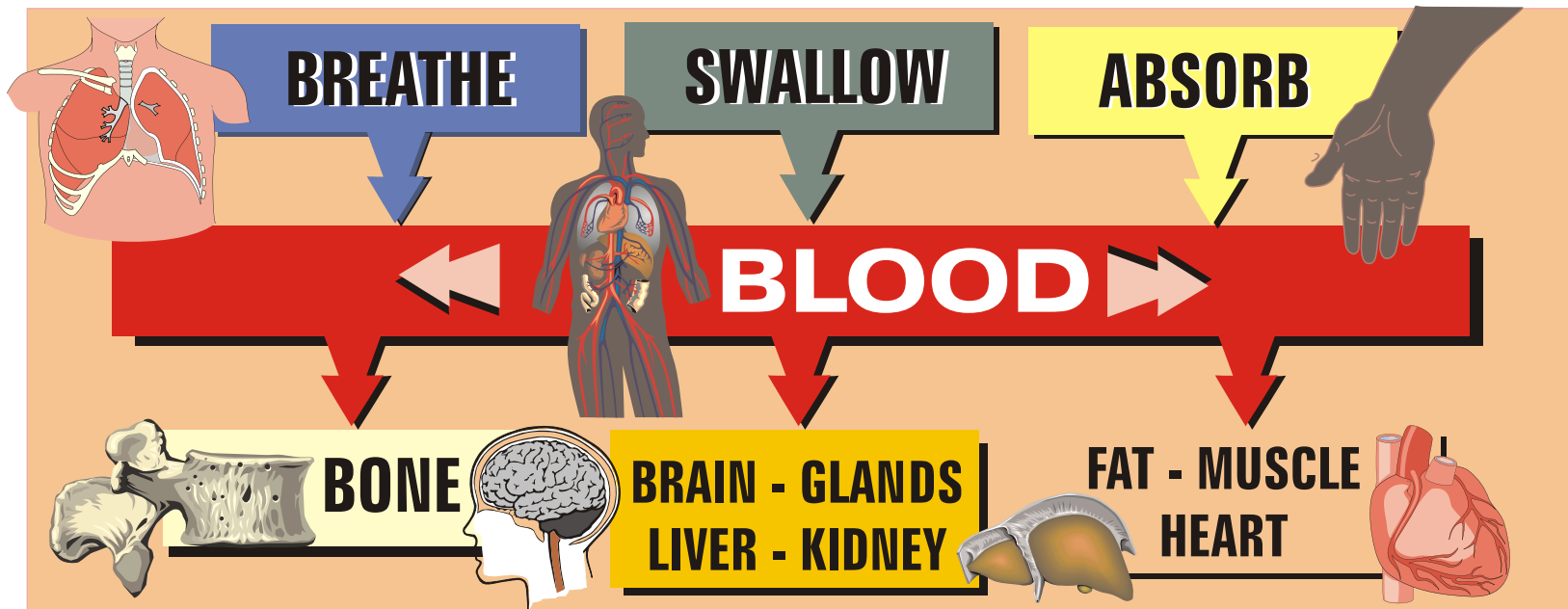
# Health Hazards

## ROADWAY SAFETY



## How Do Health Hazards Harm Us?

Toxic substances can enter the body by 3 routes.



The effects of toxic substances may be

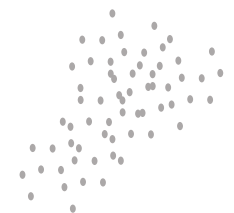
- Short-term or acute: effects such as eye irritation or dizziness
- Delayed or chronic: effects such as cancer or chronic lung disease

# How Harmful Is Silica?

**Silica is common but can be very harmful.**

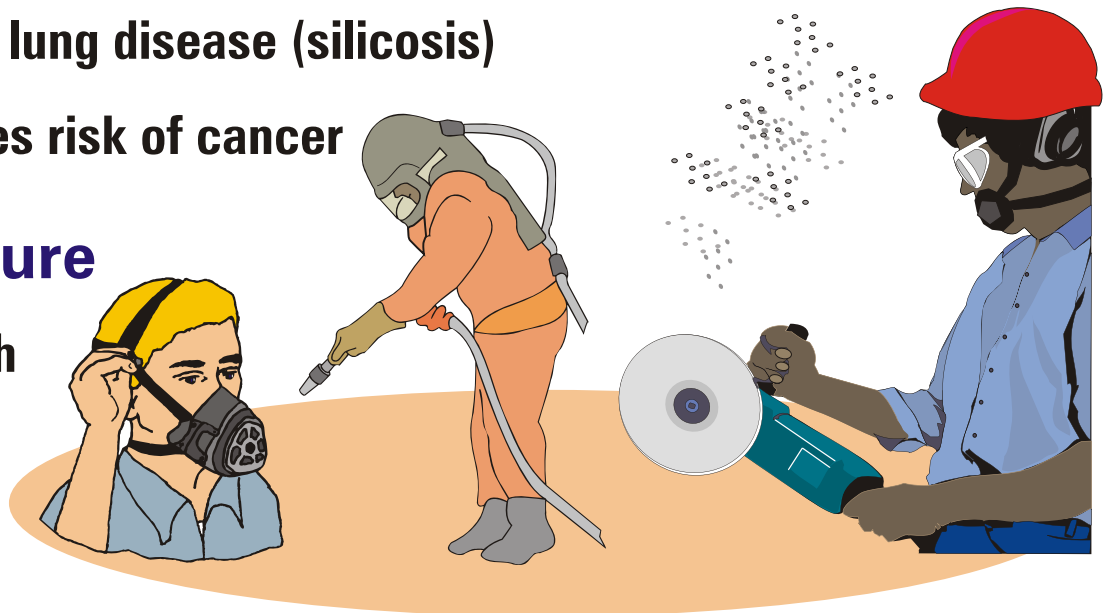
## Silica dust

- Found in many construction dusts such as concrete, rock
- High exposure tasks include sand blasting, rock drilling, cutting concrete
- Long-term exposure leads to lung disease (silicosis)
- Long-term exposure increases risk of cancer



## To prevent silica exposure

- Reduce airborne dust through ventilation and wetting
- Use NIOSH-approved toxic dust respirators



BEGIN  
INSTRUCTION  
ZONE

# Health Hazards

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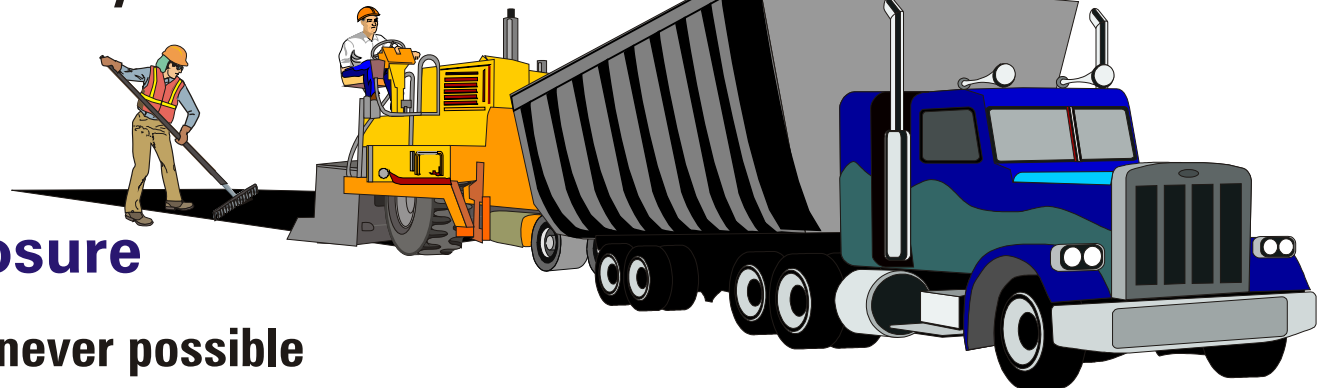
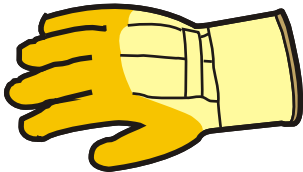
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# How Harmful Is Asphalt?

**Asphalt fumes and skin contact can be harmful.**

## Asphalt

- Fumes may cause eye, respiratory irritation
- Hot asphalt can severely burn skin



## To prevent exposure

- Work upwind whenever possible
- Maintain a lower temperature to minimize fumes
- Use ventilation on paving machines
- Wear gloves, long sleeves to prevent skin contact





# Health Hazards

## ROADWAY SAFETY



# How Harmful Is Wet Concrete?

**It can cause dermatitis and skin burns.**

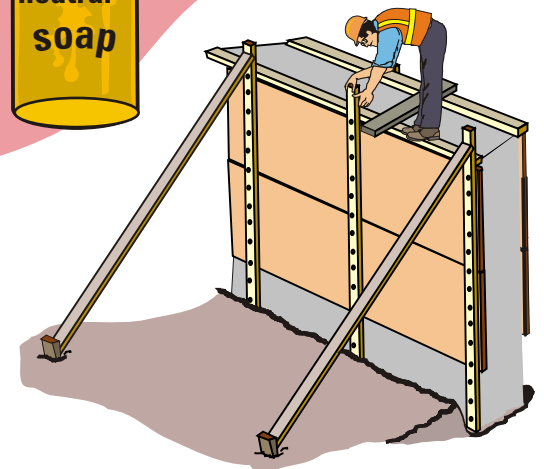
## Dermatitis can be

- Irritation from caustic chemicals in concrete
- Allergic reaction



## Prevent dermatitis and burns

- Wear long-sleeved gloves
- Keep concrete out of your boots
- Change gloves/boots when contaminated inside
- Wash hands in clean water with pH-neutral soap
- Protect cuts with bandages
- Wear eye protection





# Health Hazards

## ROADWAY SAFETY



## How Harmful Is Lead?

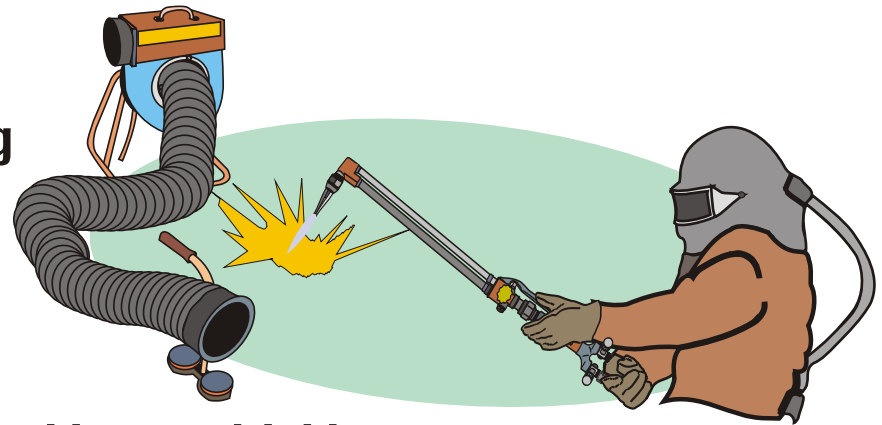
**Lead damages nervous and reproductive systems.**

### Lead

- Toxic metal found in paints on bridge renovation
- Dust and fume can be inhaled or ingested during sandblasting, welding, cutting
- Dust can be carried home and poison your family

### To prevent lead poisoning

- Remove paint before cutting or welding
- Use long-handled torches for cutting
- Use local exhaust ventilation
- Wear the proper respirator
- Wash face and hands before eating, smoking, or drinking
- Shower and change clothes before leaving work
- Get your blood lead tested periodically to assure you are not overexposed





# Health Hazards

## ROADWAY SAFETY



# Are There Other Health Hazards?

**Most can be avoided with basic protections.**

## Other hazards include

- Common substances such as solvents and CO
- Special products such as sealants, paints

## Avoiding health hazards means

- Reviewing the product Material Safety Data Sheets (MSDS)
- Limiting exposure as much as possible
- Staying upwind of hazardous exposures
- Making sure that hazard controls such as fans are working
- Wearing protective equipment such as respirators, skin coverings
- Promptly reporting any health complaints to your supervisor

