

# Healthy Housing and Home Performance



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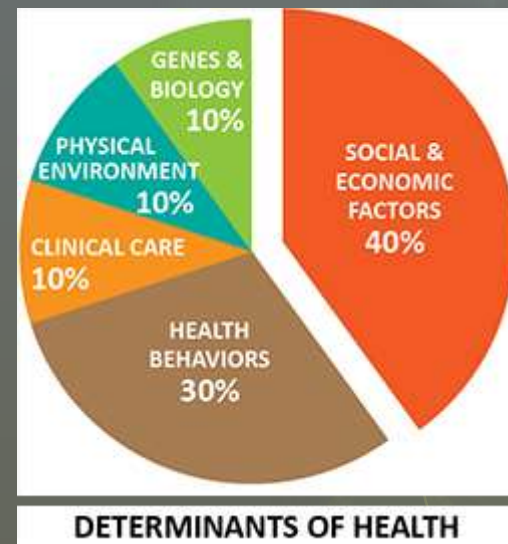
# Population Health

- Zip Code is larger predictor of health than DNA
- Example: Lincoln Park
- Social Determinants of Health
  - Economic Stability
  - Education
  - Neighborhood And Built Environment
  - Health and Health Care
  - Social and Community Context



# Intersection of Health and Built Environment

- Housing Stability
- Food Security/Access to Healthy Foods
- Early Childhood Development
- Quality of Housing
- Crime and Violence
- Environmental Conditions
- Health Literacy
- Social Cohesion
- HOUSING QUALITY



# The Scope of the Problem

- 9 million households considered “unhealthy”
- 3% of US health care costs due to inefficient and unhealthy housing
- 14 million missed days of school – asthma is #1 reason
- \$30 billion anticipated cost by 2020 due to trip and fall injuries to seniors
- \$43.4 billion currently due to lead poisoning
- 535,000 lead poisoned children
  - Increased Juvenile Crime 600%
  - Increased Drop Out Rate 700%
  - Decrease in Lifetime Earnings

National Center for  
**HEALTHY HOUSING**

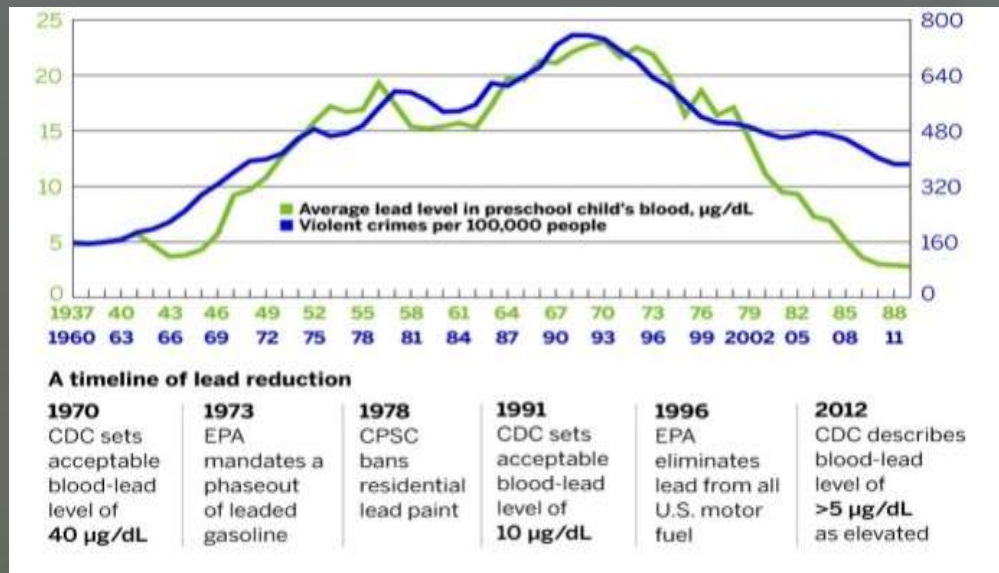
# Just Lead...

- \$4 million households with children exposed to high levels of lead
- \$43.4 billion currently due to lead poisoning
- 535,000 lead poisoned children
  - Increased Juvenile Crime 600%
  - Increased Drop Out Rate 700%
  - Decrease in Lifetime Earnings
- Learning disabilities/loss of IQ points
- ADD/Hyperactivity
- Speech Language Delays



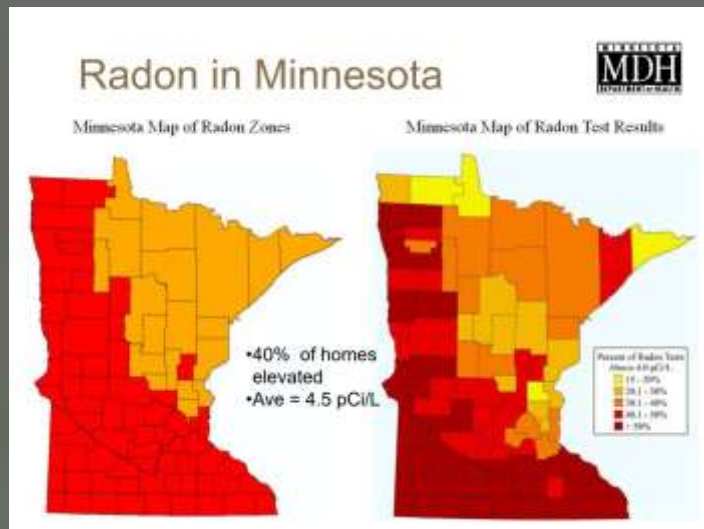
# Green and Healthy Homes Initiative

- For every \$1 of lead hazard control programs, ROI \$17-\$221
- Adjusted for inflation, \$954,000 per child for 2.2 to 4.7 IQ point increase



# Differential Impacts

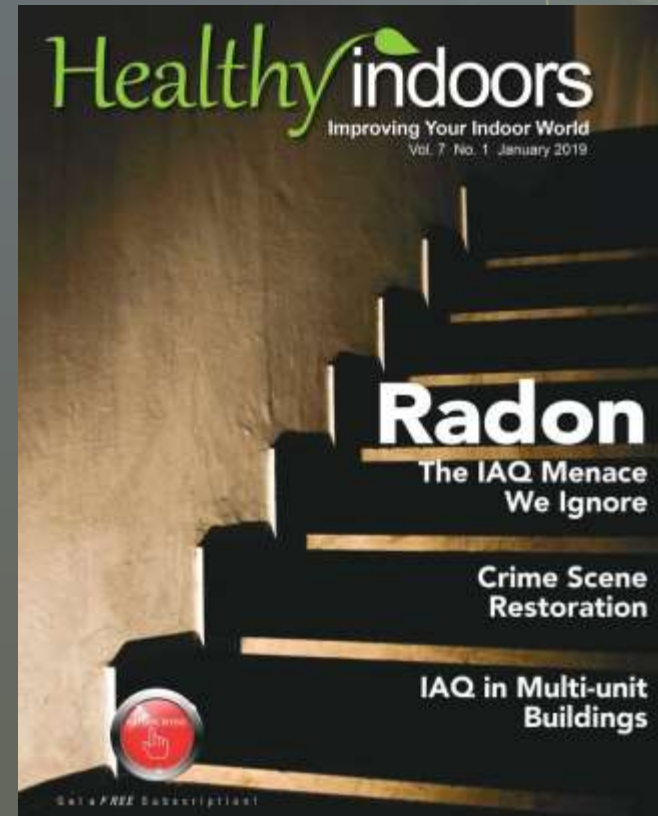
- Age-based impacts and challenges
- Housing stock
- Geography
- Population susceptibility
- Core community functioning





# Principles of a Healthy Home

- Keep it:
  - Dry
  - Clean
  - Contaminant Free
  - Pest Free
  - Well Ventilated
  - Well Maintained
  - Safe

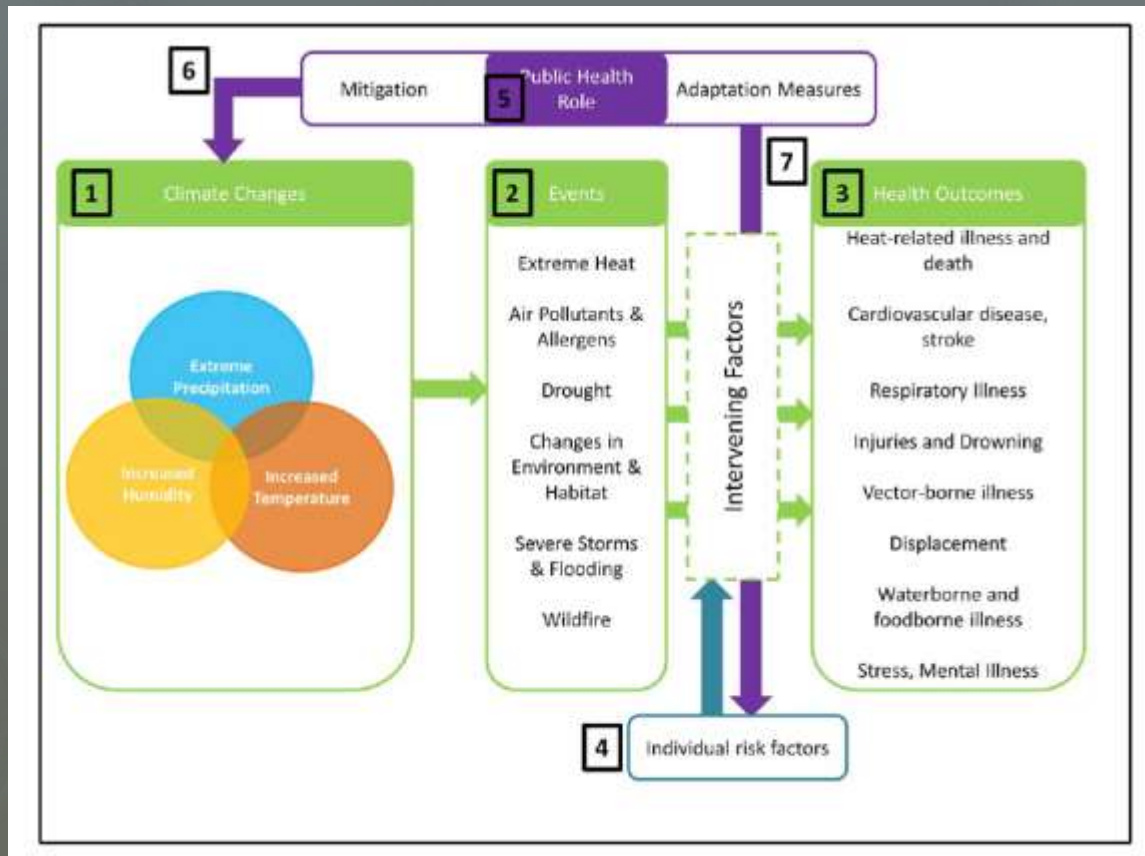


# DRY

- Dihydrogen monoxide kills!
- Water can cause mold, structural damage, and provides optimal conditions to attract pests

- Repair leaks
- Ensure proper waterproofing
- Proper ventilation
- Educate residents on operations and maintenance

# Impact of Climate Change



# Consider Rain Ready Housing Principles

- Coordinate to combat and prepare for more frequent storms
- Many improvements aid in energy efficiency

## Contractor Roles:

- Landscaping and paving
- Handiwork and general construction
- Plumbing and sewer repair
- Foundation repair and waterproofing
- Gutters and downspouts

# Healthy Housing Assessment

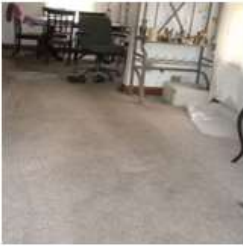
- Acquire good background information
- Understand occupants' risks
- Provide quality education and services

## Resources:

- [Housing Inspection Assessment](#)
- [Home Safety Checklist](#)
- [Healthy Homes Maintenance Checklist](#)
- Grant dollars may be available for homeowners
  - Innovation mini-grants for solution providers

# Comprehensive Approach- Case Study

**Old carpets =  
allergens**



**Water leaks =  
mold hazards**



**Deteriorated  
windows = air leaks**



**Broken hot water  
heater and furnace**



**Defective gutters =  
water leaks**



**Chipping paint =  
lead hazard**



**Broken tile =  
safety hazard**



**Broken ducts =  
higher heating bills**



# Interwoven Interventions

- Lead Hazards
  - Window replacement
  - Paint stabilization
  - Lead safe work practices and lead-specific cleaning
- Integrated Pest Management
  - Baits, traps, reduced entry, behavioral change
  - Mattress and pillow covers
- Ventilation Improvements
  - Air conditioners, dehumidifiers, and kitchen, bath, and dryer venting
- Mold remediation
- Removal or cleaning of carpets
- Household injury prevention
  - CO and smoke detectors, cabinet locks and electrical outlet covers, trip and fall hazard repair
- HEPA-vacuum and indoor allergen reduction kit
- Radon/asbestos
- Weatherization/EE
  - Caulking, air duct sealing, plumbing repairs, hot water heater blanket, programmable thermostats, etc.



# Different Points of Entry

- Health Educator – Health Practitioner – School – Contractor – Energy Auditor
  - Lead Hazard Control and Reduction
  - Healthy Homes Interventions
  - Indoor Allergens
  - Safety
  - Energy Efficiency
  - Weatherization
- Healthy Homes Evaluator Certification
- Certified Age-In-Place Specialist







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LOCAL ENERGY MATTERS

Questions?  
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