Communicating the Health Effects of Climate Change

A TOOLKIT FOR PUBLIC HEALTH OUTREACH

National Center for Environmental Health
Division of Environmental Hazards and Health Effects
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How to Use this Presentation

The CDC Climate and Health Program developed the following slides in collaboration with climate communication experts to help you talk about the health harms of climate change. Our hope is that this presentation makes it easier to incorporate consistent, evidence-based public health messaging into your existing communications.

Tips for developing your presentation:

• **Mix & Match:** Choose the slides that best fit your location and your audience.
• **Customize:** Most of the slides are editable. Insert content specific to your program and locale. Use the licensed photos provided here, or even better, use photos that add a local flavor.
• **Use Plain Language:** Follow Federal Plain Language guidelines using CDC’s resources (https://www.cdc.gov/other/plainwriting.html).

Please contact Eric Lahr (ekl8@cdc.gov) for questions or technical support.
The Public Health Effects of a Changing Climate

HOW CLIMATE CHANGE IS HARMING HEALTH AND WHAT WE CAN DO TO PROTECT THE PUBLIC

National Center for Environmental Health
Division of Environmental Hazards and Health Effects
What is Climate Change?

Some solar radiation is reflected back into space.

Greenhouse gases act like a blanket.

Solar radiation enters Earth’s atmosphere.

Solar radiation is trapped in Earth’s atmosphere.
How is Climate Change Affecting Health?

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AFFECTING HEALTH DIRECTLY

EXTREME HEAT

Higher heat, increased humidity, longer and more frequent heat waves can lead to:

dehydration and heatstroke

More Vulnerable: Outdoor workers, student athletes, people in cities, people without air conditioning, people with chronic diseases, pregnant women, older adults, and young children
AFFECTING HEALTH DIRECTLY

AIR POLLUTION

Increased wildfires, smog, pollen, and mold can lead to:

asthma and allergy attacks

More Vulnerable: People with heart and respiratory conditions such as heart disease, asthma, or chronic lung disease
AFFECTING HEALTH DIRECTLY

EXTREME WEATHER

Increased frequency and severity of heavy downpours, floods, droughts, and major storms can lead to:

injury, illness, displacement, and death

More Vulnerable: People who lack access to evacuation routes and people who can’t use stairs when elevators are out of service, people in wheelchairs, older adults, the poor, and people with disabilities, particularly if they are unable to access elevators and evacuation routes
SPREADING DISEASE
INKETS, TICKS, AND RODENTS

Higher temperatures, changes in rain patterns, and disrupted ecosystems help spread:

diseases carried by insects, ticks, and rodents

More Vulnerable: People who spend more time outdoors in places where these insects and other disease-carriers live
Higher water temperatures, heavier downpours, rising sea levels, and more flooding help spread:

gastrointestinal illness, diseases from toxins in swimming areas and drinking water

More Vulnerable: Children, the elderly, people with weakened immune systems, people in remote or low-income communities with inadequate water systems, and people in communities that are dependent on fish and shellfish.
SPREADING DISEASE

CONTAMINATED FOOD

Increasing temperatures, humidity, and extreme weather events help spread:

illnesses from bacteria and toxins in

More Vulnerable: Infants, young children, the elderly, the poor, agricultural workers, and people with weakened immune systems
Increasing temperatures, humidity, and extreme weather events can lead to:

undernutrition, vitamin deficiencies

More Vulnerable: Infants, young children, pregnant women, older adults, and poor communities
DISRUPTING WELL-BEING

MENTAL HEALTH PROBLEMS

Increased frequency and severity of extreme weather events can lead to:

stress, depression, anxiety, PTSD, and suicidal thoughts

More Vulnerable: Children, older adults, pregnant and postpartum women, people with mental illnesses, the poor, homeless people, first responders, and people who rely on the environment for their livelihood
What Communities Can Do

PUBLIC HEALTH HARMS OF CLIMATE CHANGE
BRACE
CDC’s framework for climate and health adaptation

BUILDING RESILIENCE AGAINST CLIMATE EFFECTS

1. Anticipate Climate Impacts and Assess Vulnerabilities
2. Project the Disease Burden
3. Assess Public Health Interventions
4. Develop and Implement a Climate and Health Adaptation Plan
5. Evaluate Impact and Improve Quality of Activities
Develop a Heat Response Plan

- Develop or expand the extreme heat alert system
- Ensure vulnerable populations can be reached
- Plan cooling centers ahead of time
Cool Your Community

- Increase the tree canopy to help keep buildings and the surrounding air cooler
Cool Your Community

- Use cool paving and reflective and porous materials to help lower the surrounding temperature.
AIR POLLUTION
What Communities Can Do

Encourage Active and Mass Transportation

- Walking, biking, and shared transportation can lower traffic-related pollution
AIR POLLUTION

What Communities Can Do

Reduce Energy Waste

- Energy efficient buildings and vehicles can reduce air pollution
- Weatherize homes, offices, schools, and other buildings
- Encourage the purchase of fuel efficient vehicles
STORMS & FLOODING
What Communities Can Do

Prepare Infrastructure

- Identify buildings, roads, and other infrastructure that are most vulnerable to damage
- Ensure existing and new infrastructure can withstand increasingly intense storms and flooding
CONTAMINATED WATER
What Communities Can Do

Improve Sanitation and Water Management

• Protect drinking water sources and delivery systems
• Prevent sanitary sewer overflows
CONTAMINATED FOOD
What Communities Can Do

Disseminate Food Safety Messages

• Monitor the effect of water contamination on agricultural products that may lead to foodborne illness
• Bolster food safety messaging to public during extreme weather events
Inform Public of Community Assistance Resources

• Disseminate information about food assistance programs to highest risk populations
• Include information about who qualifies and how to access support
MENTAL HEALTH PROBLEMS

What Communities Can Do

Prepare an Emergency Plan

• Develop behavioral health plans for disasters
• Include clear messaging about access to mental health services and crisis counseling
What Individuals Can Do

PUBLIC HEALTH HARMS OF CLIMATE CHANGE

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Stay Hydrated

• Drink plenty of liquids
EXTREME HEAT
What Individuals Can Do

Stay Cool

• Find places to cool off, such as a local mall, a library, or a cooling center
Check on Family and Friends

- Keep a list of family, friends, and neighbors to check on during an extreme heat event.
EXTREME HEAT
What Individuals Can Do

Plan Ahead

• Subscribe to local health alert systems
• Keep air conditioners and fans up-to-date
• Check for local programs that:
  o Provide free or reduced-cost air conditioners
  o Help pay utility bills
  o Provide transportation to cooling centers during extreme heat events
EXTREME HEAT

What Individuals Can Do

Plant Rooftop Gardens

- Planting trees and plants helps provide shade to buildings and keeps surrounding air cooler
AIR POLLUTION
What Individuals Can Do

Monitor Air Quality Index and Stay Indoors

When pollen counts or ozone levels are high:
• Stay indoors if you have asthma, heart problems, or are otherwise at risk
• Cancel outdoor activities or move to air-conditioned location
STORMS & FLOODING

What Individuals Can Do

Be Careful of Moisture Indoors

- Carefully clean and dry flooded areas
- Watch for mold growing indoors
INSECTS, TICKS, & RODENTS
What Individuals Can Do

Prevent Insect Bites

• Use insect repellant
• Wear long sleeves and pants
• Check carefully for ticks after being outdoors in wooded or grassy areas, especially in the summer
INSECTS, TICKS & RODENTS
What Individuals Can Do

Avoid Contact with Rodents and Droppings

- Keep your home, cabin, or outbuildings free of mice and rats
- Check with your local health department to learn how to safely clean up dead rodents and droppings
CONTAMINATED FOOD
What Individuals Can Do

Know Home Food Safety Basics

- **Cook**: To the right temperature
- **Clean**: Wash hands and surfaces often
- **Chill**: Refrigerate promptly
- **Separate**: Raw meats from other foods, don’t cross-contaminate
CONTAMINATED FOOD

What Individuals Can Do

See Your Doctor if You Have:

- High fever (over 101.5 degrees F)
- Blood in the stools
- Frequent vomiting that prevents you from keeping liquids down
- Signs of dehydration, including a decrease in urination, a dry mouth and throat, or feeling dizzy when standing up
- Diarrheal illness that lasts more than 3 days
HUNGER AND MALNUTRITION

What Individuals Can Do

Find Out if Your Family Qualifies for Assistance

- SNAP [insert state-specific link]
- WIC [insert state-specific link]
- School breakfast and lunch programs [insert state-specific link]
MENTAL HEALTH PROBLEMS
What Individuals Can Do

Know Your Signs of Stress

- Difficulty concentrating and making decisions
- Reduced interest in usual activities
- Disbelief, shock, and numbness
- Anger, tension, and irritability
- Fear and anxiety about the future
MENTAL HEALTH PROBLEMS
What Individuals Can Do

Socialize with Friends and Family

• Connect and talk with your friends, family members, and your community
MENTAL HEALTH PROBLEMS
What Individuals Can Do

Take Mental Breaks

- Engage in activities to decompress such as exercise, listening to music, or spending time with a friend
MENTAL HEALTH PROBLEMS
What Individuals Can Do

Ask for Help

• Seek professional help when symptoms are disrupting your day-to-day activities
Established in 2009, the Climate and Health Program provides leadership to help communities anticipate, prepare for, and respond to the public health impacts of climate change.

The Climate and Health Program developed the five-step Building Resilience Against Climate Effects (BRACE) framework to help communities with adaptation planning.

CDC’s Climate-Ready States and Cities Initiative (CRSCI) is helping 16 states and two cities implement the BRACE framework.
What We Are Doing in [name of community]

ADAPTATION IN ACTION

National Center for Environmental Health
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OUR APPROACH
What We Are Doing in [name of community]

CHALLENGE
What climate and health challenge(s) did your community address?

SOLUTION
What solutions did you implement?

RESULTS
What were your successes? How should they be replicated or scaled up? Why do these preventative and precautionary steps matter?
What We Are Doing in [our community]

OUR SOLUTION
[brief description about program, detailing which health harm it is addressing]

UNIQUE OFFERING
[information about key aspect of the program and how it is unique]

LASTING IMPACT
[information on results and consequences of program]

[add photos here]
Adapting to the New Normal
What We Are Doing in Minnesota

OUR SOLUTION
Extreme Heat Toolkit to guide local health officials in responding to heat events

UNIQUE OFFERING
Use GIS mapping to identify vulnerable communities and neighborhoods

LASTING IMPACT
Resources allocated to most vulnerable areas and participating communities grew from two to six in just one year
Bringing Health to the Forefront
What We Are Doing in San Francisco

**OUR SOLUTION**

The city’s first heat vulnerability index to pinpoint most susceptible neighborhoods

**UNIQUE OFFERING**

Index analyzed surface temperature data alongside 21 social and environmental vulnerabilities

**LASTING IMPACT**

Index now informs city planning decisions, education efforts, and designated cooling centers
There’s Much We Can Do

Educate public about the public health harms of climate change and what they can do

Create early warning systems that help people prepare for climate-influenced events

Educate the Public

Enhance Monitoring

Contribute to Public Dialogue

Research

Inform stakeholders about climate-related health harms and how those harms will be experienced locally

Use research to better understand health harms and effective responses