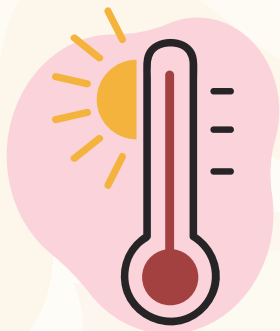


Advisory Note on Heatwaves



What is a heatwave?

- * Heatwaves are periods of unusually high temperatures compared to what is typically expected in a region.
- * They are defined as five or more consecutive days of extreme heat, with maximum daily temperatures of at least 40°C in the plains and 30°C in the hills of India.
- * Heatwaves, though natural phenomena, are worsening due to climate change.
- * The impact of heatwaves is intensified by factors such as **high humidity**, **air pollution levels**, **strong winds**, and the **duration** of the heatwave.



Stay updated on local weather forecasts and government alerts by listening to the radio, watching TV, and reading newspapers. The government issues types of alerts during heatwaves:

Color Code	What does it mean?
Red alert (Severe Condition)	An increase of 6 °C more than the normal temperature
Orange alert (Moderate Condition)	An increase of 4 to 5 °C more than the normal temperature
Yellow Alert (Heatwave Warning)	Nearby maximum normal temperature
Green (Normal Temperature)	Below the maximum normal temperature

Who is most affected

- ✦ Elderly
- ✦ Infants & Children
- ✦ Pregnant Women
- ✦ Migrants
- ✦ Outdoor Workers (Labourers, Farmers, Street Vendors) and Factory workers
- ✦ Homeless and Economically Disadvantaged Populations
- ✦ Persons with Disabilities
- ✦ Persons with Chronic Health Conditions (Asthma or Cardiovascular condition etc.)
- ✦ Immunocompromised people or persons more prone to getting an infection (HIV, Tuberculosis, Hepatitis B and C, Cancer, Arthritis, Diabetes, Malnutrition, Transplant patients, Multiple Sclerosis, Persons Smoking and Drinking on a Regular Basis)
- ✦ Residents of High-altitude and Remote Areas



How does heat impact our bodies:

Our body produces heat naturally and absorbs it from the environment (temperature, humidity, airflow). To cool down, it:

- * **Releases heat** through blood vessels or sweating (internal).
- * **Uses cooling methods** like fans or cold showers (external).



However, in extreme heat (above 35°C), sweating becomes less effective, making it harder for the body to stay cool. This leads to overheating of the body.

Our bodies react to heat in different ways and extreme heat can cause various health issues. Recognizing the symptoms early is key to staying safe and preventing serious complications.

Let us explore some milder and severe symptoms of heat:



MILDER SYMPTOMS

(can be treated at home)

- * Dry lips, sticky mouth
- * Excessive thirst
- * Excessive sweating
- * Weakness, dizziness
- * Nausea, vomiting
- * Small blisters
- * Heat rashes
- * Mild/slightly high body temperature
- * Cramps, usually in arms and legs
- * Nosebleeds (common in hot and dry environments)

SEVERE SYMPTOMS

(requires immediate medical attention)

- * Confusion/not responding clearly, seizures, coma, very dull, not waking up (**MOST SEVERE**)
- * Very high body temperature for longer than two hours (40°C/104°F)
- * Fainting
- * Dark urine
- * No urine in more than eight hours
- * Rapid heartbeat and breathing
- * No sweating (but skin may be wet and hot)



Please note that heat rashes in diapered areas and few wet diapers are worrisome signs for infants and young children



Heat-Related Illnesses

SEVERITY OF HEAT-RELATED ILLNESSES

De-
hydration

Heat
Rashes

Heat
Edema

Heat
Cramps

Heat
Syncope

Heat
Exhaustion

Heat
Stroke



Dehydration:

What to look for:

- Thirst, dry mouth
- Dark yellow urine or infrequent urination
- Fatigue, dizziness, or confusion



What to do →

- ✓ Move to a cool, shaded area to prevent further fluid loss
- ✓ Drink water or oral rehydration solutions (ORS) to replenish fluids and electrolytes
- ✓ Avoid beverages with caffeine or alcohol, as they can increase fluid loss
- ✓ Rest and monitor symptoms; if they persist or worsen, seek medical attention

Heat Rashes:

What to look for:

- Tiny bumps on skin, usually in chest or upper back
- Could result in tiny blisters caused by blocked sweat ducts in hot, humid weather



What to do →

- ✓ Stay in a cool, dry environment
- ✓ Keep the affected area clean and dry
- ✓ Wear loose, breathable clothing
- ✓ Avoid heavy creams or lotions that may block sweat glands
- ✓ Use a cool compress to relieve itching

Heat Edema:

What to look for:

- Swelling in the hands, feet, or ankles
- Typically occurs in the first few days of exposure to hot weather



What to do

- ✓ Rest in a cool place
- ✓ Elevate the swollen area to reduce swelling
- ✓ Stay hydrated by drinking water
- ✓ Avoid standing or sitting for long periods in the heat



Heat Cramps:

What to look for:

- Painful and involuntary contractions of skeletal muscle
- Flushed and/or moist skin

What to do

- ✓ Stop physical activity and move to a cool place
- ✓ Drink cool, clean water, and use ORS and glucose packets
- ✓ **Get medical help right away** - if you have heart problems or are on a low-sodium diet, or if the symptoms persist or continue



*Heat Syncope:

What to look for:

- Brief loss of consciousness, usually in person standing for a prolonged period or rapidly changing positions in a warm environment

What to do ↓

- ✓ The person should rest in a cool place and lie down on their back with their legs slightly raised to improve blood flow
- ✓ Ensure there's no serious underlying cause for fainting

Heat Exhaustion:

What to look for:

- No altered mental state
- High core body temperature (under 40°C)
- Increased thirst
- Heavy sweating
- Headaches
- Cool and/or damp skin
- Weakness and tiredness
- Muscle cramps
- Nausea or vomiting



What to do ↓

- ✓ Move the person to a cool place
- ✓ Use a fan to actively circulate air around the person
- ✓ Sip water
- ✓ Put a cool, wet cloth on the body or pour water on the skin to regulate body temperature
- ✓ **Get medical help right away** - if you are throwing up or if the symptoms worsen



Heat Stroke:

What to look for:

- Altered mental state (e.g., inappropriate behavior, seizures, delirium, slurred speech, extreme lethargy, coma/loss of consciousness)
- Very high core body temperature (40°C/104°F)
- Associated symptoms include:
 - » Nausea
 - » Rapid heartbeat/breathing
 - » Hot and dry or damp skin
 - » Sweating may or may not be present

What to do ↓

- ✓ **To be treated as a medical emergency - Call the medical emergency helpline**
- ✓ Move the person to a cooler place
- ✓ Increase circulation of cool air around them
- ✓ Give the person a cold bath or place cold towels/packs on their body (especially the head, neck, armpits, and groin)
- ✓ Do not give anything to drink (as it could lead to choking or other complications if the person is incapacitated or their airway is compromised)

Impact of Heat on Individuals with Existing Health Conditions

Heatwaves can significantly worsen the health of individuals with pre-existing medical conditions. When temperatures rise, the body works harder to maintain a stable internal temperature. This additional strain can affect how certain health conditions are managed or controlled.

Heat can interfere with medications, alter how the body responds to treatments, and exacerbate symptoms. Vulnerable individuals may experience faster dehydration, increased stress on vital organs, and complications from their underlying conditions.

Some of the health conditions that are especially sensitive to the effects of heat include:

- * Heart diseases
- * Respiratory conditions (e.g., asthma, COPD)
- * Diabetes
- * Kidney diseases
- * Mental health disorders
- * Hypertension (high blood pressure)
- * Pregnancy-related conditions

To stay safe during heatwaves, individuals with these conditions should take extra precautions, such as staying hydrated, avoiding peak heat hours, and seeking medical advice if symptoms worsen.



Emotional and Mental Well Being

Heatwaves not only impact physical health but also take a toll on mental well-being. Common mental health issues include:



Mood (Anger/Irritability): Anger outbursts, restlessness, irritability, migraines.

Mood (Depression): Feelings of sadness, isolation, loss of appetite, fatigue.

Fatigue: Tiredness, lack of energy, reduced productivity.

Sleep Disturbances: Difficulty falling asleep, poor sleep quality, worsening of health conditions due to lack of rest.

Take care of your mental health by following the given steps:

Stay hydrated; drink water in small sips every 30 minutes.

Avoid excessive caffeine and alcohol; opt for lukewarm water to stabilize mood.

Rest in cool, ventilated spaces; use lighter bedding and light-blocking curtains.

Follow a consistent sleep schedule and maintain a gap between dinner and bedtime.

Engage in calming activities, hobbies, or light social interactions, especially after sundown.

Take lukewarm showers before bed to relax the body and mind.

Manage physical health conditions like diabetes, hypertension, and hormonal imbalances to reduce mental strain.

Agriculture and Livestock: Adapting to Heatwave Conditions

Agriculture:

Extreme heat can be harmful to animals as well. It can lead to heat stress, reduced food intake, production losses, health problems, and even death. Here are some ways to take care of your livestock during extreme heat:



Ensure animals have shade and access to cool water for comfort and hydration in the heat.

Avoid making animals work during the hottest period of the day to prevent overheating.

Keep shelter roofs cool with straw, white paint, or a dung-mud mixture to lower internal temperatures.

Use fans, water sprays, and foggers in shelters to provide a cooling effect for animals.

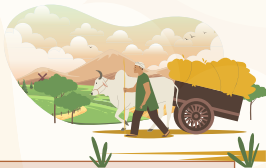
Spray animals with water and take them to water bodies during extreme heat for cooling.

Provide nutrient-rich food like green grass, supplements, minerals, and salt; allow grazing in cooler hours.

Install curtains and ensure ventilation in poultry houses to prevent heat stress and maintain bird well-being.

Take care of your fields

Frequent periods of intense heat can damage the crops, fields and produce as well. Here are some ways you can protect your crops and fields from a heatwave:



Establish a watering routine with regular and light practices for optimal crop hydration.

Increase watering frequency during crucial growth stages for enhanced plant development.

Use crop residue, straw, or plastic sheets to maintain soil moisture, aiding water retention.

Water crops in the cooler evening or early morning hours for better absorption.

Employ sprinklers for a rain-like watering effect; consider barriers or shelters during extreme heat.

Cultivate heat-resistant crops that thrive in high-temperature conditions.

Monitor crops by checking both weather forecasts and plant conditions, adjusting care accordingly.

Create shade using structures or materials to shield plants from excessive sunlight and heat, promoting health and comfort.

General Care in the Heatwave:

Eating a healthy diet:



Eat foods that help you keep hydrated during a heatwave such as:

- » **Vegetables:** Local gourds (bitter gourd, bottle gourd, snake gourd, pumpkin), root vegetables (beetroot, carrot, radish), green leafy vegetables, and cucumber.
- » **Fruits:** Amla (Indian gooseberry), bananas, watermelon, mango, lemon, and tomato.
- » **Local Flours/Pulses:** Sattu and moong.
- » **Cooling Foods:** Local dishes like tambuli/thambli made with ginger, curry leaves, and curd help digestion and cool your body.

Avoid the following foods and drinks which can lead to dehydration:

- » Fried foods, salty foods and excessive sugar
- » Alcohol, tea, coffee, and soda
- » Very cold water as it can lead to stomach cramps and indigestion

Include refreshing and hydrating drinks in your diet such as:

- » Coconut water, sugarcane juice, and lime juice are easy to find and great for hydration.
- » Homemade drinks like lassi, torani (rice water), and buttermilk are excellent choices.

If you work outdoors for long hours, keep ORS or glucose powder handy for constant hydration.

How to make your own ORS:

- » 6 level teaspoons of sugar
- » ½ level teaspoon of salt
- » Dissolve in 1 L of drinking water

Some medicines may increase sweating, so drink extra water to stay hydrated.

Cooking Tips:

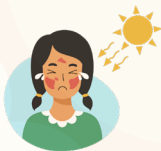
- » Avoid cooking during the hottest period of the day.
- » Don't cook large amounts of food at once, as it may spoil quickly.



Please note that when you have to relieve yourself, your urine should be clear. If not, you need to drink even more water than you are drinking currently.

Skin and body:

Heat rashes and sunburns are common in this season but there are natural remedies to prevent or treat them:



Herbs like aloe vera, sandalwood, neem, rose, basil, and vetiver are great for soothing and cooling the skin. Check if these are locally available. If not, use an affordable lotion that contains these herbs.

Baking soda can be added to bath water for relief.

Cooling oils: Apply coconut or sesame oil to your head to keep it cool and refreshed.

Light exercise early in the morning helps tone the body and cool it down as sweat evaporates.

Outdoor care

Avoid outdoor work from 10 am to 3 pm if possible, but if you have to be outside, here's what you can do to stay cool and safe:



Wear light, natural fabrics like cotton for light activities, such as walking. For more strenuous tasks, wear light-colored polyester to prevent sweat from soaking into your skin.

Use cotton caps or headgear to protect your head from the sun.

Carry a damp cloth to place around your head or neck for cooling relief.

Bring a simple hand fan made from natural materials or a paper fan.

In polluted areas, wear a mask or cover your nose and mouth to protect yourself from dust and chemicals.

Take short rest breaks often to cool down and rehydrate.

Sit under natural shade, like a large tree, during breaks. If that's not possible, find any shaded area with good airflow.

Wash your hands before eating to stay clean and safe.

Home Care:

Make your home a cool refuge from the heat and pollution:



Use ceiling fans if the temperature is below 35°C. If it's hotter than 35°C and humid, use fans only if you have good ventilation, as circulating hot air can make it worse.

Floor fans and water coolers are great options to keep the air cooler.

Turn off lights and devices that generate heat whenever possible.

Natural screens like vetiver or straw can help block sunlight from windows. Avoid metallic or plastic curtains that absorb heat.

If your home gets a lot of direct sunlight, use dark-colored, lightweight curtains or tinted glass/shutters for windows.

Open windows at night to improve airflow.

Place bowls of water around your house to help cool the air through evaporation.

Keep plants near your windows and inside your home to naturally cool the space.

For the exterior of your house:

Use lighter colors to paint the outside of your house and roof, like lime-based whitewash, which reflects heat.

Natural clay roofs are a good choice, as they don't absorb heat like tin or metal roofs. If not, use reflective surfaces to keep the heat out.

Haystacks or plants on roofs can help cool your home naturally.



Equip yourself and your family by having an emergency plan ready to fight extreme situations during a heatwave.



If you are worried about illnesses, have doubts about your health, and/or are unsure about visiting a doctor, reach out to the nearest available:

ANM

ASHA
workers

Anganwadi
centre



In case of an emergency reach out to your nearest:

ESI (Employees State Insurance)

Primary Health Centre/ Community Health Centre.
If these are not accessible, reach out to the nearby
District Hospital.

For medicines prescribed by a doctor, reach out to the nearest Janaushadhi Kendra.

