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# AYUSH

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# Beat the heat through Homoeopathy

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Heat rash also known as Miliaria or prickly heat is one of the most common skin complaint faced during monsoon season. This condition affects persons of all age group. The main cause is triggered by blocked eccrine sweat glands and ducts.

Heat rash, also known as miliaria rubra, is caused by sweat gland obstruction during exposure to hot environments, leading to inflammation of the eccrine ducts.

Miliaria frequently affects neonates and individuals suffering from increased sweating as well as those living in hot and humid climates. The main cause of miliaria is obstruction of the eccrine sweat glands or ducts. This can be due to cutaneous debris or bacteria such as *Staphylococcus epidermidis* with its formation of biofilms.

## Clinical features

Based on the level of the sweat duct obstruction, miliaria is divided into three types:

- Miliaria crystallina (sudamina) is due to obstruction of the sweat ducts close to the surface of the skin in the stratum corneum of the epidermis.
- Miliaria rubra follows obstruction of the sweat ducts in the deeper layers of the skin (mid-epidermis).
- Miliaria profunda (tropical anhidrosis) is the result of sweat leaking from the sweat glands into the middle layer of skin (blockage at or below the dermoepidermal junction) following repeated episodes of miliaria rubra.



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Symptoms of heat rash vary depending on type:

- Miliaria crystallina presents as 1–2 mm superficial clear blisters that easily break. The blisters can look like beads of sweat. There is no inflammation. The blisters are usually seen widely spread on the head, neck, and upper trunk. The vesicles break easily to leave a bran-like scale.
- Miliaria rubra, the most common form of heat rash, results in red, 2–4 mm, non-follicular papules and papulovesicles. They are very itchy. Background erythema is often present. In children, miliaria involves the trunk and the skin folds of the neck, axilla or groin. In adults, miliaria often affects the upper trunk, scalp, neck and flexures, particularly in areas of friction with clothing.
- Miliaria pustulosa is a variant of miliaria rubra with pustules.
- Miliaria profunda presents as asymptomatic deep papules. The flesh-coloured, 1–3 mm diameter

papules develop on the trunk and extremities.

### **Ways of prevention**

- In hot weather, dress in loose, lightweight clothing that wicks moisture away from the skin.
- Don't wrap newborns in too many layers.
- In hot weather, limit physical activity. Stay in the shade or in an air-conditioned building or use a fan to circulate the air.
- Keep your sleeping area cool and well ventilated.
- Avoid creams and ointments that can block pores.
- Avoid drugs that cause sweating, such as clonidine, beta blockers and opioids.

### **Homoeopathic management** **Apis Mellifica**

Apis Mellifica is an excellent remedy for bringing relief from the burning, stinging and severe prickling heat rash. It soothes the burning and

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prickling sensation in heat rash cases. The skin eruptions are very sensitive to touch and the skin is red. The desire and tendency to bathe in cold water and uncover for relief from the burning sensation are the key factors that call for the use of *Apis Mellifica*. The person feels worse when he or she is in a warm room and looks for cool open air to get relief.

### **Sulphur**

The top Homoeopathic remedy for relieving itching and burning in heat rash is Sulphur. The skin shows eruptions, either pimples or pustules, with itching. Scratching the eruptions is the general relieving factor found in a majority of persons needing Sulphur. The itching and burning get intolerable at night. Getting warm in bed excites the itching. Aversion to bathing is another key symptom. Washing and bathing worsen the itching in such persons. Intense heat in palms and soles.

### **Natrum Mur**

Natrum Mur is the ideal Homoeopathy remedy for heat rash that gets worse with exertion. Natrum Mur can be taken in all those cases of heat rash where eruptions and itching increase with exertion in physical activities.

Shooting pain appears in the eruptions following exertion. Itching, stinging and pricking sensation are also prominent. Worse in heat of sun. Better in open air. Natrum Mur patient may have a high craving for salty food.

### **Hepar Sulph**

Hepar sulph is very effective for heat rash with pus containing eruptions. Very sensitive pustules on skin with intense pricking and burning stinging sensation. The pustules are sensitive to the slightest touch. Excessive perspiration is present in almost all persons needing Hepar Sulph.

### **Aconitum napells**

Aconite is ideal when red pimples with itching appear on the body. The child gets restless with the itching and feels good in open air. The itching worsens in a warm room. The child also may demand water in large quantities.



# Heat stroke & its management

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Heat stroke is the most serious form of heat injury and is considered a medical emergency. Heat stroke can kill or cause damage to the brain and other internal organs. Although heat stroke mainly affects people over age 50, it also takes a toll on healthy young athletes.

Heat stroke often happens as a progression from milder heat-related illnesses such as heat cramps, heat syncope (fainting), and heat exhaustion. But it can strike even though we have no previous signs of heat injury.

Heat stroke results from prolonged exposure to high temperatures usually in combination with dehydration which leads to failure of the body's temperature control system. The medical definition of heat stroke is a core body temperature greater than 104° F, with complications involving the central nervous system that occur

after exposure to high temperatures. Other common symptoms include nausea, seizures, confusion, disorientation, and sometimes loss of consciousness or coma.

## **Symptoms of Heat Stroke**

The hallmark symptom of heat stroke is a core body temperature above 104° F. But fainting may be the first sign.

### ***Other symptoms may include:***

- Throbbing headache
- Dizziness and light-headedness
- Lack of sweating despite the heat
- Red, hot and dry skin
- Muscle weakness or cramps
- Nausea and vomiting
- Rapid heartbeat, which may be either strong or weak
- Rapid, shallow breathing
- Behavioral changes such as confusion, disorientation, or staggering
- Seizures
- Unconsciousness

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## **Risk factors for heat stroke**

Heat stroke is most likely to affect older people who live in apartments or homes that don't have air conditioning or good airflow. Other high-risk groups include people of any age who don't drink enough water, have chronic diseases, or who drink excessive amounts of alcohol.

Heat stroke is strongly related to the heat index, which is a measurement of how hot we feel when the effects of relative humidity and air temperature are combined. Relative humidity of 60% or more hampers sweat evaporation, which hinders the body's ability to cool itself.

## **Other risk factors associated with heat-related illness include:**

### **Age**

Infants and children up to age 4 and adults over age 65 are particularly vulnerable because they adjust to heat more slowly than other people.

### **Health conditions**

These include heart, lung, or kidney disease, obesity or underweight, high blood pressure, diabetes, mental illness, sickle cell trait, alcoholism, sunburn and any conditions that cause fever.

## **Medications**

These include antihistamines, diet pills, diuretics, sedatives, tranquilizers, stimulants, seizure medications (anti-convulsants), heart and blood pressure medications such as beta-blockers and vasoconstrictors, and medications for psychiatric illnesses such as antidepressants and antipsychotics. Illegal drugs such as cocaine and methamphetamine also are associated with an increased risk of heat stroke.

## **Prevention of heat stroke**

The best defense against any heat-related illness is prevention. Keep a close watch on the elderly and infants, people on certain medications, athletes and outdoor workers.

- Don't overexert yourself
- Avoid caffeine, coffee, aerated drinks and alcohol, which can speed up dehydration
- Drink water every 15 minutes, even if not thirsty
- Rest in the shade to cool down
- Wear a hat and light-coloured clothing
- Juice of Aegle marmelos (vilvam)



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in summer acts as a good heat absorbing agent.

- Drink Amla juice in summer to maintain pitha balance
- Drink coconut water for dehydration
- Massage coconut oil on the scalp to normalize the body temperature
- Have buttermilk 3 times a day
- Consume fruits and vegetables with high water content like lettuce, watermelon, apples, broccoli
- Avoid any food items that are high in salt, as excess sodium could hamper the regular production of sweat in the body
- Add healthy sources of protein to the diet, which may include nuts, pulses and olive oil. This will steady the blood sugar levels, thereby preventing heat strokes.
- Dried grapes soaked in water should be taken as it has high water content and are rich in reducing sugar that gets absorbed fast into the blood

## **Yoga for preventing heat stroke**

### **1. Sheetali pranayamam**

The practice of Sheetali breathing calms the mind, and reduces the stress or fight-flight response. It cools the body and mind, the blood pressure is also lowered. The purpose of sheetali breathing is to reduce body temperature.

### **2. Shitkari Pranayamam**

Cools down the body temperature so it is useful in fever, reducing high blood pressure.

### **3. Chandra Anulom Vilom Pranayamam**

It is a cooling breathing practice. The body becomes cool. It lowers the high blood pressure.

### **First aid for heat stroke**

- If someone is suspected of a heat stroke, immediately move the person to an air-conditioned environment, or at least a cool, shady area, and remove any unnecessary clothing.
- If possible, take the person's core body temperature and initiate first aid to cool it to 1010 F to 1020 F.

### ***Try these cooling strategies***

Fan air over the patient while wetting the skin with water from a sponge or garden hose.

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Apply ice packs to the patient's arm-pits, groin, neck and back. Because these areas are rich with blood vessels close to the skin, cooling them may reduce body temperature.

### **Cold water**

It may become necessary to immerse the entire body in cold water or ice water so that the body temperature can be brought down as quickly as possible. This could be done by sitting in a bathtub filled with cold water for around 5 or 10 minutes, However make sure it should be assisted by a family member or medical personnel during this time.

### **Cooling blanket**

If it is not possible to sit in a bathtub, we can wrap a special cooling blanket after packing the groin area, neck, chest and back with ice packs.

### **Evaporation**

This technique is one of the newer ones used by doctors, for bringing down body temperature. Since evaporation leads to cooling, this method can be as effective as soaking in the bathtub. In this process, some cool water will be misted on the skin and warm air will be fanned over the body so that the water evaporates and the skin gets cooler.

Controlling shivering :It is important to ensure that the person does not shiver, as the simple act can raise the body temperature to a great extent. Therefore, in case any of the body cooling other techniques are cause to shiver. The doctor may advise a muscle relaxant, which reduces the shivering.

### **Rehydrate the body**

Drink a lot of water. drinking extra fluids can help reduce the risks of dehydration.

### **Medicinal plants that can be used for treating heat stroke**

#### **1. *Cocos nucifera***

Coconut water has cold and pitha reducing property so can be used to treat fever.

#### **2. *Vetiveria zizanioides***

It is considered the best drug for treating burning sensation and skin problems as an external application. Its potency is cold and has pitha-reducing properties and can be used for burning sensation, excessive thirst and fever. Root paste can be applied externally to reduce burning sensation in heat stroke. Drink a cold infusion of vetiveria to treat dehydration.



### **3. Gulkand of rose**

Gulkand of rose acts as a cooling agent

### **4. Santalum album**

Santalum album(sandal wood) has cold potency and it has pitha reducing properties. It is used in burning sensation and excessive thirst. It is one of the best cooling medicinal plants. For reducing the temperature and burning sensation apply sandal paste on the body.

### **Diet and other regimen**

- It should be taken care that water is taken at frequent intervals in summer. A little salt may be added to it which helps in maintaining the balance of salts in the body.
- A normal diet is recommended to the patient who is suffering from

heat stroke and food hard to digest should be avoided. Fried foods should be avoided.

- Vegetables like cucumber and bottle guard can be intaken.
- Fruits like watermelon, muskmelon, mulberry should be consumed more.
- Buttermilk is also considered as one of the best remedy to reduce the increasing heat in the body.

### **Outlook for heat stroke recovery**

After recovering from heat stroke, we'll probably be more sensitive to high temperatures during the following week. So it's best to avoid hot weather and heavy exercise until it's safe to resume normal activities.

# SUGARS, ICE CREAMS AND WHAT NOT ?

## Foods to avoid in summer

**DR. ANJALI K P**  
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Summer brings with it a myriad of health complications, ranging from minor discomforts to life-threatening conditions, as the temperature rises and people spend more time outdoors. Indeed, the rise in temperature is a significant problem globally, with far-reaching implications for ecosystems, communities, and economies worldwide. Over the past century, the Earth's average temperature has increased by approximately 1.1 degrees Celsius (2.0 degrees Fahrenheit).

### Potential problems during summer

#### 1. Dehydration

As the summer sun beats down and temperature rises, it is essential to keep an eye on hydration levels. Water is vital for optimal functioning for various bodily processes from regulating temperature to digestion process. Dehydration occurs when the body loses more fluid than it takes in, altering the

balance needed for optimal functioning.

#### ***Reasons for Dehydration***

Dehydration occurs due to excessive sweating during hot weather, intense physical activity or due to not drinking enough water throughout the day.

#### ***Signs of Dehydration***

Recognizing the signs of dehydration is crucial for addressing it affectively. Symptoms may include Thirst, dry mouth, dark yellow urine, headache, dizziness, fatigue and reduced urine output.

#### ***2. Heat Exhaustion and Heatstroke***

Heat exhaustion and heat stroke are serious heat related illness that occurs when body overheats due to prolonged exposure to high temperature and inadequate hydration. Even though both are due to excessive heat exposure they differ in severity and requires different levels of medical attention.

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## **Heat Exhaustion**

Milder form of heat related illness, it occurs when the body loses electrolytes and fluids through sweating faster than they can be replaced.

### **Common symptoms**

Heavy sweating, weakness or fatigue, nausea or vomiting, headache, muscle cramps, cool and moist skin, rapid heartbeat.

If left untreated heat exhaustion can progress to heatstroke.

## **Heat stroke**

Heat stroke is a medical emergency that occurs when body core temperature rises to more than 104 degree Fahrenheit (40 degrees Celsius).

Symptoms of heat stroke includes high body temperature above 40 degrees Celsius, altered mental state or confusion, rapid and shallow breathing, lack of sweating, throbbing headache, nausea and vomiting, unconsciousness or seizures.

## **3. Sunburn**

sunburn is a form of radiation burn that affects the skin as a result of overexposure to ultraviolet radiation from the sun. The severity of symptoms can vary depending on factors such as the skin type, the intensity of exposure and duration of exposure, whether any protective measure like

sunscreen are used.

## **Symptoms of sunburn**

Redness and inflammation of skin pain, warmth in the affected area, blisters in severe cases, fever and chill

## **4. Heat Rash**

Also known as prickly heat, heat rash occurs when sweat ducts become blocked, leading to red, itchy bumps on the skin. In more severe cases the bumps may develop into larger fluid filled blisters or pustules. It is usually seen in hot and humid climate conditions, after intense physical activity which leads to sweating, wearing tight or synthetic clothing that doesn't allow sweat to evaporate. It commonly affects areas where clothing rubs against the skin or where sweat collects like neck, chest, armpits, back, groins.

## **Remedy to overcome summer related problems**

### **Life style modification:**

#### **1.Stay Hydrated**

Aim to drink at least 8 glasses of water per day which is roughly 2liters, according to summer Institute of medicine, in summer an adequate daily intake of about 3.7 liters for men and 2.7liters for women including fluids from other sources are recommended.



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## **2. Sun protection**

Use sunscreen with a high SPF above 40 which provides about 97.5% of protection from UVB rays, it is essential to remember that no sunscreen gives 100% protection.

## **3. Proper clothing**

Opt for light weight loose fitting clothing made of breathable fabric to prevent heat rashes.

## **4. Limit outdoor activities**

Scheduling outdoor activities during cooler times of day such as early morning or evening to reduce exposure.

## **5. Make ORS**

Make ORS solution at home and drink it 3-4 times a day, it is very effective home remedy to get relief from dehydration.

## **Diet During Summer**

During summer maintaining a well-balanced diet is essential for optimal health and vitality.

- Include curd and butter milk in the diet during summer. They help to remain cool in the summer and has good amount of proteins and probiotics (beneficial bacteria) that helps for smooth functioning of digestive system.
- Remember to add fresh summer fruits like watermelon, pears, papaya,

berries, mango and oranges in daily diet.

- Fresh summer vegetables contain antioxidants which prevent cellular damage due to intense heat of sun. Cucumber salad is well preferred.
- Dark leafy greens of drumstick, spinach turnip etc. helps to protect skin from sun damage.
- Sprouts are easy to digest and contain high levels of water and nutrients.
- Hot and spicy ingredients are to be used sparingly in summer as they heat up body further.
- Food such as red meat, mutton, and beef generate excessive body heat and are best avoided during summer.
- Sugary cool drinks, ice creams are to be avoided, as they are body warming.

## **Herbal Remedy**

Along with life style modifications and diet several home herbal remedy can be adopted to avoid from problems related to hot summer.

Following are some of the remedies used to tackle dehydration:

### **1.Fennel seeds**

Boil half a teaspoon of fennel in one litre of water and make fennel water.

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Drink a cup 3-4 times a day.

## **2. Sugarcane juice**

Nutrients like calcium, potassium, iron etc. are found in high amounts in sugarcane juice, which are exhausted in the body due to dehydration. Add equal quantity of water to a cup of sugarcane juice, dilute the juice and consume it 2-3 times a day.

## **3. Tulsi**

Tulsi has a lot of medicinal properties hence used in treatment of many diseases. Basil leaf juice or basil extract is added in a quantity of 2 drops in a cup of plain water and consume in twice a day.

## **4. Hibiscus Flower**

Hibiscus flower has good quantity of vitamin C and hence beneficial in dehydration. Take one fourth cup of water, add one fourth cup of jaggery and some Hibiscus and flowers and boil it to make tea or mix one teaspoon of aloe Vera juice in one cup of this tea and consume it twice daily

## **5. Yogurt or Buttermilk**

Buttermilk is natural coolant of the body, booster's energy and good for digestive system. Drinking a glass of buttermilk before leaving from home helps to control dehydration. Yogurt can be consumed in case of no inflammation.

## **6. Banana**

Banana contains more potassium. When dehydration occurs the amount of potassium in the body decreases. Recommended to eat 2 bananas daily.

## **7. Tender Coconut water**

Drinking of Tender coconut water prevents dehydration and maintain electrolyte imbalance of the body.

## **8. Lemonade**

Lemonade is a healthy drink, and it is considered as treasure of vit C. Drinking lemonade mixed with honey is more beneficial

## **9. Sandal wood**

Sandal wood is considered as best remedy for heat rashes. Powder of red or white sandalwood mixed with rose-water is found effective.

## **10. Alovera**

Alovera is best known for its cooling effect and anti-inflammatory and anti-microbial properties, thus best for heat rashes. It also helps in post anti-inflammatory hyperpigmentation. Fresh Alovera gel is applied on the area.

## **11. Neem and tulasi**

Taking shower in water boiled in neem and tulasi seems to be effective for itchy rashes.

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## **12. Vetiver**

Can be utilized as a cooling drink and as a tropical applicant for skin irritations.

### **Ayurvedic Management of dehydration**

Some among commonly used ayurvedic formulations are mentioned below

#### **Internal Medication**

1. Drakshadi Kashaya
2. Laja Kashaya phanta
3. Vidaryadi Kashaya
4. Vidaryadi lehyam
5. Draksharishtam
6. Suvarnamuktadi gulika

#### **External Medication**

1. Ksheerabala Taila
2. Himasagara Taila
3. Kachuradi Churna

#### **External Application**

1. Shiro dhara (pouring medicated liquids overhead)
2. Sheeta lepana (Application of cold potency drugs on the body).
3. Thalam (Application of the cold potency drugs on the bregma)

### **Ayurvedic Medication of heat Rashes**

#### **Internal medication:**

1. Chandanasavam
2. Usheerasavam
3. Pravalabhasma
4. Panchamooladi Kashaya

#### **External medication**

1. Chandanadi thaila
2. Durvadi thaila
3. Himasagara thaila

Combating summer related problems required a multifaceted approach incorporating diet and lifestyle modification, which can effectively alleviate the problems related to summer like dehydration and skin problems. Herbal remedies and Ayurvedic principles can effectively mitigate these issues ensuring healthier and more enjoyable summer experience.

# Seasonal Regimen in Summer

As told in Ayurveda

**DR.SALMAN SALEEM**  
BAMS, pursuing MPH



As the temperatures rise and the days grow longer, the summer season beckons us outdoors to enjoy the warmth and sunshine. However, amidst the joys of summer activities, it's essential to be mindful of potential health complications that can arise during this time of the year. From heat-related illnesses to sunburns and allergies, the summer months present unique challenges to our well-being. In this we will explore various strategies and precautions to tackle these health complications effectively, ensuring a safe and enjoyable summer season for all.

## Summer in Ayurveda

The word Ritucharya is made of two words - Ritu means seasons, Charya means do's and don'ts(regimen). This important chapter discusses in detail regarding different seasons and the regimen.

In Greesma (summer) the sun rays become powerful and appear to be destructive. Kapha decreases day by day and Vata increases consequently, hence avoid use of salt, pungent and sour foods, heavy physical exercises and exposure to sunlight, during this season. Food which are sweet, light (easy to digest), fatty, cold and liquid should be taken.

## Heat-related problems

During summer, the body can experience various effects due to factors like heat, humidity, and increased outdoor activities. These effects can include dehydration, sunburn, heat exhaustion, and increased sweating. It's important to stay hydrated, protect the skin from sun damage, and take breaks in the shade or air conditioning to prevent heat-related illnesses. Additionally, summer can also be a time

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for increased physical activity, which can lead to changes in muscle tone, endurance, and overall fitness levels.

### **Heat exhaustion and heatstroke**

Heat exhaustion and heatstroke can occur when the body overheats due to prolonged exposure to high temperatures and humidity.

### **Dehydration**

Hot weather can lead to excessive sweating and fluid loss, resulting in dehydration if fluids are not replenished adequately.

### **Sunburn**

Prolonged exposure to the sun's ultraviolet (UV) rays can cause sunburn, which can lead to pain, redness, blistering, and an increased risk of skin cancer.

### **Allergies**

Summer can exacerbate allergies due to increased pollen levels from grasses, weeds, and trees.

### **Vector-borne diseases**

Mosquitoes and ticks, which are more active during the summer, can transmit diseases. Respiratory issues Air pollution levels may rise during the summer months, exacerbating respiratory conditions such as asthma

and chronic obstructive pulmonary disease (COPD).

### **Skin infections**

Skin infection increased sweating and humidity can create favorable conditions for the growth of bacteria and fungi, leading to skin infections such as athlete's foot and yeast infections. To mitigate these health risks, it's essential to stay hydrated, use sunscreen, wear protective clothing and insect repellent, practice food safety, manage allergies, and avoid prolonged exposure to extreme heat and sun. Additionally, individuals with pre-existing health conditions should take extra precautions and consult their healthcare providers for personalized advice.

### ***Regimen that can be followed***

In Ayurveda, the traditional Indian system of medicine, staying healthy during the summer involves balancing the body's doshas (energies) and adjusting lifestyle practices accordingly. Here are some Ayurvedic tips to tackle potential health complications of summer:

**1. Stay hydrated:** Drink room temperature water throughout the day to balance Pitta dosha, which tends to increase during the summer.



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## **2. Follow a Pitta-pacifying diet:**

Consume cooling foods such as cucumbers, watermelon, coconut water, and fresh fruits. Avoid hot, spicy, and oily foods that can aggravate Pitta.

**3. Protect your skin:** Use natural sunscreens like coconut oil or aloe vera gel to protect your skin from the sun. Ayurveda also recommends applying cooling oils like coconut or sandalwood oil to the body before sun exposure.

**4. Practice Abhyanga:** Regular self-massage with cooling oils like coconut or sesame oil can help pacify Pitta dosha, nourish the skin, and promote relaxation during the summer months.

**5. Stay cool:** Wear light, breathable clothing made from natural fibers like cotton or linen. Avoid excessive exposure to the sun and seek shade during the hottest part of the day.

**6. Balance Pitta with herbs:** Incorporate cooling herbs to your diet to help balance Pitta dosha and cool the body from within.

## **7. Practice Pranayama:**

Cooling breathing techniques like Sheetali and Sheetkari Pranayama can help reduce body heat and promote relaxation during the summer.

## **8. Stay grounded:**

stress-reducing practices like meditation, yoga, and spending time in nature to keep Pitta dosha in balance and promote overall well-being.

By following these Ayurvedic tips, you can support your body's natural balance and maintain optimal health during the summer season. However, it's essential to consult with a qualified Ayurvedic practitioner before making any significant changes to your diet or lifestyle.

## **Common Drink**

### **Buttermilk**

Buttermilk is an essential part of the diet of many people in India, and every household has one fixed buttermilk recipe that is foolproof. Be it in the form of lassi or chaas, the love for buttermilk remains the same. This traditional Indian drink is made with yogurt, spices and herbs. It is hydrating, light on the stomach and extremely beneficial for the digestive process. Since yogurt helps cool down the body's temperature, it makes for an ideal drink to sip on during the summer season. As summer is here, we have all the more reason to whip up some delicious buttermilk at home. Sambaram is a popular Kerala-style spiced buttermilk made with yogurt, curry

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leaves, ginger, and green chillies. You can relish it as is or even pair it with your everyday summer meals to beat the scorching heat. It is super refreshing and also helps in digestion after an indulgent meal. The best part is that you only need 5 minutes to prepare this drink.

### **Lemon drink**

No matter how much you try to stay indoors and take care of your health, you just cannot avoid the scorching sun, which ends up draining out all the energy, which further leads to electrolyte imbalance in the body. Loaded with the goodness of Vitamin C, lemons are the most easily available citrus fruits. It's the time for fun in the sun, drives with the windows down, and water fights on the roofs, but these activities can be draining during summer but lemons are truly the saving grace.

### **ORS Solution**

To prepare an Oral Rehydration Solution (ORS) at home, you can follow this simple recipe

#### **Ingredients:**

- 1 liter of clean water (boiled and cooled, if possible)
- 6 level teaspoons of sugar
- ½ level teaspoon of salt
- 1 full lemon

#### **Instructions:**

1. Pour the clean water into a clean container.
2. Add 6 level teaspoons of sugar to the water.
3. Add ½ level teaspoon of salt to the water.
4. Squeeze 1 full lemon
5. Stir the mixture until the sugar and salt are completely dissolved.

Your ORS solution is now ready to drink. It's essential to follow the proportions correctly to ensure the proper balance of electrolytes. ORS can be stored at room temperature for up to 24 hours, but it's best to prepare it fresh whenever needed. If available, commercially prepared ORS packets can also be used according to the manufacturer's instructions.

By taking proactive steps to address these health complications, we can ensure a safer and healthier summer experience for ourselves and our loved ones. From staying hydrated and applying sunscreen to practicing food safety and insect bite prevention, each precaution plays a vital role in safeguarding our well-being during the summer months. With the information and strategies outlined in this guide, we can embrace all that summer has to offer while prioritizing our health and wellness.

# Lets make the summer cooler for the pregnant mothers

## DR. ARUN GUPTA

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Ayurveda, codified ancient wisdom of healthy and happy living describes every aspect of health including the effects of season on the wellbeing of mankind. Summers or Grishma Ritu is the extreme of the summer solstice or Adaana Kala and is characterized by extreme heat and humidity. Classical text of Ashtanga Hridaya explains that during summer solstice, humans loses vitality and strength due to extreme heat in the environment which in turn leads to loss of moistness and unctuousness of the Kapha thereby causing the dryness i.e. Vitiating of Vata. Ritucharaya or measures to prevent effects of extreme weather condition on health has been described for the normal and healthy human beings. Indian summers are hot and long, the daytime temperature may range from 34° to 50° which may lead to various heat related illnesses.

Heat related illnesses are more common in pregnant women than the non-pregnant women as their bodies have to work harder to cool down both the pregnant woman and the developing baby. Pregnant women are more likely to get dehydrated and won't be able to cool themselves with sweating. Effects of summer are more deleterious on the pregnant women and can adversely affect the growth and development of the fetus. Many published research studies have indicated that exposure to greater temperatures during pregnancy is associated with increased risk of pre-term birth, still birth, lesser birth weight and length. Heat exposure in pregnancy has been associated with a range of adverse maternal health outcomes including maternal hypertension and pre-eclampsia, poor mental health and insomnia and

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many tropical skin conditions. In the third trimester, hot summer season, pregnant women are more vulnerable to reduction in amniotic fluid thereby leading to Intra-uterine growth restriction. Overwhelmed with the increased body weight, increased heat production, weight gain during pregnancy, fetal burden, and burden of domestic and workplace duties, pregnant woman's ability to tolerate heat becomes compromised. Reduced vitality during summer season is compounded with special physiological state of pregnancy which continuously take a toll on the strength of the mother. Therefore, it is important to save a mother and fetus from the deleterious effects of extreme temperatures of summer through Greeshma Ritucharya.

High heat exposure is also contraindicated during pregnancy and is enlisted as Garbhoghaatkar Bhava i.e. Pregnancy terminating factor in classical Ayurveda textbooks of medicine. Furthermore, Ayurveda classical texts prescribes diet and lifestyle for pregnant women which are cooling, sweet, liquid diets and even for the management of disorders occurring during pregnancy with the treatment options i.e. herbs and diets which are mild,

sweet, cooling, comforting. Notably, that the prescribed dietary and herbal remedies for pregnant women based on principles and practices of Ayurveda i.e. Garbhini Paricharya are similar to the those mentioned in Grishma Ritucharya i.e. Seasonal Wellness Regimen for Summers. Even in the management of vaginal bleeding during pregnancy a meticulous observance of Greeshma Ritucharya is advised in classical texts of Ayurveda. This indicates that Greeshma Ritucharya is advisable for pregnant women to reduce the effects of greater heat exposure especially in a tropical country like India. Following Greeshma Ritu charya not only promotes maternal and fetal health but also prevents the abortion and fetal demise. Therefore, as enlisted in the seasonal wellness program for summers a pregnant woman should follow the do's and don'ts of Grishma Ritucharya which is in sync with the Garbhini Paricharya as mentioned in classical Ayurveda Texts:

### **Don'ts**

1. Pregnant women should avoid higher amounts of salt, spicy, hot and sour foods which include High salt snacks, salt preserved foods, high salt processed snacks, brined snack, pickles,

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chutneys with salts, papads, garlic, vinegar, red chillies, spices which produce more heat in the body and cause retain more water and adversely affect the thermo-regulation of the pregnant women and cause Klama i.e. Fatigue or Exhaustion in pregnant women.

2. Pregnant women should avoid strenuous works in hot and humid conditions and moving out in sunny weather for avoiding exhaustion and heat fatigue.

3. Pregnant women must abstain from fasting and thirst during summers.

4. Pregnant women must not indulge in gymming and other strenuous aerobic exercises, strenuous pranayama which enhances heat production in the body.

5. Pregnant women should use cold water sprinkles, sprays, (Kaya Seka) cold packs, mud packs, chandan and karpoor packs for cooling the body.

6. Pregnant women must inhabit an air-conditioned, shaded, well-ventilated and cool spaces and rooms aerated and cooled with fans.

6. Pregnant women should wear soft, loose, cotton clothes for better skin cooling.

## **Do's**

1. Pregnant women must take foods which are sweeter i.e. fruits, milk, ghee, coconut water, eggs, sugarcane products, honey, palm sugar, cereals, rice, rice gruels, kheer, custards, pulses, fresh vegetables, cucurbits, salads etc. Sattu or Roasted and coarsely pounded barley and rice with jaggery and ghee are prescribed for pregnant women.

2. Pregnant women must take small and frequent fluid rich and light to digest diets which promote hydration and are refreshing.

3. Pregnant women should take cool diets and plenty of fluids in form of sharbat, juices, cold soups to cool their bodies.

4. Pregnant women may take meat soups of lean meats which are of Jan-gala origin instead of farm poultry or farm meats.

5. Pregnant women may take nourishing Panaka i.e. Sharbats and preserves made of fruits like Pomegranate, Phalsa, Kokum and other refreshing fruits. Rasala i.e. Shree khanda a sweet delicacy made up of Yogurt, milk and fruits sweetened with jaggery or honey can be given for warding off heat and nourishing the fetus. Raita



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and flavored butter milk can also be given to pregnant women.

6. Flavored water infused with flowers of Paatla or other scented flowers which are non-toxic can be given to pregnant women.

7. Boiled and cooled Buffalo milk stored in mud pot can be given to pregnant women for nourishment during summers.

### ***AYUSH Based Public Health***

#### ***Interventions***

1. As pregnant women are more susceptible in face of heat exposure, AYUSH makes the general public aware about the risks of high heat exposures before the onset of summers through vulnerability alarms in local media, social media and other channels of health communication.

2. AYUSH widely propagates Grishma Ritucharya – Summer Based Seasonal Wellness Program for protective and promotive effect on fetal and maternal health in all health institutions which provide Mother and child health services.

3. As a part of Supraja Program and Ayush Gram Program, these prescriptive advice of Ayurveda are widely propagated among pregnant women

enrolled in these programs.

4. ASHA, Anganwadi workers and ANMs are educated about Greeshma Ritucharya and Garbhini Paricharya for better health communication strategies in the community settings.

5. AYUSH can distribute sachets of Sweetened Sattu Powder for use in summers and tetra pack Panakas i.e. Panchsara, Chinchā Panaka, Dadima Panaka, Kharjura Panaka can be distributed among pregnant women.

6. Capacity building and continued AYUSH Education program for Greeshma Ritucharya and Women Health in general and particularly pregnancy care during summers are organized nationwide.

# Gut Microbiome

The primary focus of every season

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The main focus of the Ayurvedic medical system is prevention, which can be accomplished by altering diet and lifestyle habits in response to weather variations. Numerous environmental factors have an impact on the composition of the human gut microbiome. The entire Ayurvedic preventive and treatment approach is centered on controlling and regulating "Agni," or the digestive fire. The disease cannot develop without Agni (digestive fire) being disturbed. An enormous amount of data has shown that the gut microbiota is strongly correlated with environmental factors such as temperature and seasonal changes, as well as with diet.

Ritu, the season, is categorized according to distinct qualities that convey varying impacts on the body and the Charya, with relation to diet and behaviour to provide easy

adaptation to seasonal enforcement without changing bodily homeostasis. The Ayurveda Samhitas specified six ritus, or seasons, three for each under the broad categories of Aadana kala (Northern Solstice) and Visarga kala (Southern Solstice), with recommended dietary and lifestyle practices for each. The hottest time of year, known as grishma ritu (summer season), is from May to July. This is the last season of the Aadaan kaal, which is the period of the year when the sun is facing northward on Earth. Between Varsha ritu (the rainy season) and Vasant ritu (the spring season) is Grishma ritu. Despite the fact that summertime diets are more diversified than wintertime ones, research shows that summer time gut microbiota diversity is lower.

The human gut microbiome is as vital as any other body organ. The gut

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microbiota plays a role in pathogenesis, host metabolism, immunity, gene expression, and the effectiveness of drugs and diet. The current studies on the gut microbiome support Ayurveda's fundamental belief that gut health is essential. Therefore, it is crucial to understand the relationship between the human gut microbiome and the varying seasons, as well as the significance of the seasonal Ayurvedic regimens known as Ritucharya.

### **Impact of Grishma Ritu**

Dry winds and intensely hot sun rays that deplete the earth's cooling qualities are characteristics of Grishma Ritu. Grishma Ritu is also known to greatly elevate the pitta dosha, which is linked to lethargy, dehydration, weariness, and lack of energy. Pitta doshas is one of the three doshas that govern our body. There will also be a significant decrease in Agni bala of man, or digestive ability. Studies revealed that decrease in Gut microbiota during summer season. Both inside and outside the human body, there is an abundance of Ushna guna (heat) and Rookshatha (dryness). Because of this, our body needs more liquids to stay in balance, promote general wellness, and shield our body

general wellness, and shield our body from the damaging effects of the sun's strong rays.

### **Gut microbiome**

The human digestive-tract associated microbes is referred to as the gut microbiome. The gut microbiota engages in important activities like digestion, energy homeostasis and metabolism, the production of vitamins and other nutrients, and the development and regulation of immunological function. It also aids in the synthesis of a wide range of substances that enter the bloodstream and have an impact on different body tissues and organs.

### **Significance of grishma ritu charya on gut microbiome**

During Grishma (summer), it is recommended to eat foods that are mainly Swadu rasa (sweet) and Seeta guna (cold potency) containing rice, milk, ghee, grapes, coconut water and sugar. Saktu (roasted barley flour) products, Rasala (finely ground curd with added sugar and pepper) Shadava (juice made from various juices eg: Sweetened orange juices, bananas and pomegranates are good.

**Coconut water.** A natural beverage that is rich in electrolytes is coconut water. It cools the body, provides vital minerals, and aids in maintaining

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hydration levels. It also aids in digestion and offers a cool substitute for sugary beverages.

**Amraphala Panaka:** It is also known as the mango fruit cooler, is a vitamin and mineral-rich fruit that boosts immunity and keeps you hydrated in the summertime. This cooler gives you a boost of energy and satisfies your thirst.

**Sugarcane Juice:** Rich in nutrients, sugarcane juice instantly boosts energy levels. This refreshing drink controls bilirubin levels, guards against UTIs, and improves skin health in general.

Dependence on these foods can favour the genus *Bacteroides* (phylum *Bacteroides*), colonic polysaccharides users and saccharolytic species of the genera *Bifidobacterium* and *Ruminococcus*, which grow on carbohydrate substrates. A diet high in fat and protein should be avoided during Grishma Ritu as this has been associated with a decrease in bacteria.

The diet can affect the composition of the gut microbiota in two ways: (1) by supplying non-digestible substrates that support the growth and activity of beneficial microbes (prebiotics), and

(2) by incorporating live microorganisms known as probiotics that colonize the gut, resist digestion, and positively alter the microbial composition.

Probiotics have the ability to alter the gut microbiota's diversity, composition, and activity. Probiotics may strengthen the intestinal barrier against enteric pathogens by promoting the formation of mucin and maintaining tight junctions in the gut epithelium. Additionally, they alter the microbial ecology and intestinal immunity by stimulating the host's synthesis of  $\beta$ -defensin and IgA.

**Fruits:** Due to their simple digestion and ability to support gut health, fruits including bananas, papayas, and figs are especially valued for their prebiotic qualities.

**Vegetables:** Prebiotic fibers are associated with a number of vegetables, including as leeks, asparagus, and garlic. These veggies support equilibrium, which not only helps with digestion but also nourishes the gut ecosystem.

**Takra (Buttermilk):** Helping with digestion, bringing the body down to a temperature, and replenishing





electrolytes, buttermilk is a staple of Ayurvedic diets. Yogurt is a fantastic choice for a refreshing summertime beverage since it contains probiotics, which strengthen the digestive tract and promote gut health(Agni).

**Herbs:** Ayurvedic herbs that promote a healthy gut are believed to improve digestion, such as fenugreek, ginger, and turmeric.

Lifestyle and nutritional factors can profoundly alter commensal microbial communities, whose dysbiosis can increase susceptibility to pathogens, inflammatory diseases and infectious diseases. Microbiota-host relationship can use our endogenous gut biome to prevent many diseases and promote health.

Recognizing that cycling seasons and diet will inevitably affect the human gut microbiota, Ritucharya shows the most effective way to manipulate and regulate the host's inherent relationships of the microbiota. Providing the right gut environment with a seasonal diet can cultivate the right microbiome, which can exert beneficial metabolic effects and prevent seasonal and opportunistic infections.





NATIONAL AYUSH MISSION KERALA

# Yoga

Yogasanas beneficial for  
management of

## Type-2 Diabetes Mellitus

Surya namaskara

Katichakrasanam

Vakrasanam

Suryanadi pranayama

Nadishudhi Pranayama

Bhujangasanam

Pavanamuktasana