Summer is here – Remember that “Thousands have lived without love, not one without water.” –

Get sleep, eat clean, drink water, exercise, repeat.”  and know your illness: Diarrhea, Typhoid and Dengue.

Dengue Fever Dengue fever is caused by four serotypes of viruses belonging to the family Flaviviridae (DENV-1 through DENV-4) and is transmitted by a mosquito vector (Aedes aegypti) with prominent diurnal activity. Infection may be asymptomatic or may cause an acute
febrile illness associated with frontal headache, myalgia, and retro-orbital pain, with or without minor spontaneous bleeding manifestations (purpura, melena, conjunctival injection). Because prominent lumbosacral pain is a frequent manifestation, the term "breakbone fever" has been used to describe infection with the dengue virus. Some patients develop a macular or scarlatiniform rash as the fever abates. The rash spares the palms and soles and evolves into areas of petechiae on extensor surfaces. A second febrile period ("saddleback" pattern) may occur. In patients with severe infection, a life-threatening hemorrhage or shock syndrome may develop that includes liver failure and encephalopathy. This entity appears to be related to previous dengue viral infection, often of a different type.

Laboratory findings may include leukopenia, thrombocytopenia, and elevated serum aminotransferase levels. The diagnosis is often made based on clinical findings and is sometimes confirmed by enzyme-linked immunosorbent assay or reverse transcriptase polymerase chain reaction. Since there is no specific antiviral agent for treatment of dengue fever, therapy is supportive. No effective vaccine is currently available.
Caring for a Child or Family Member Sick with Dengue

There is no medicine to treat dengue. Symptoms of dengue can be mild or severe. Mild symptoms can be treated at home.

**Treat Mild Symptoms at Home**

- **Rest as much as possible**
- **Control fever**
  - Give acetaminophen (also known as paracetamol) to control fever and relieve pain. Always follow product label instructions. Do not give ibuprofen, aspirin, or aspirin-containing drugs.
  - Sponge the person’s skin with cool water to reduce fever.

- **Prevent dehydration** – Dehydration occurs when a person loses too much body fluid from fever, vomiting, or not drinking enough fluids.

**Signs of mild to moderate dehydration**

<table>
<thead>
<tr>
<th>Babies and Children</th>
<th>Adults</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urinates less frequently (less than 6 wet diapers per day)</td>
<td>Thirst, dry or sticky mouth</td>
</tr>
<tr>
<td>Dry mouth, tongue, lips</td>
<td>Not peeing very much, dark yellow pee</td>
</tr>
<tr>
<td>Few or no tears: when crying</td>
<td>Dry, cool skin</td>
</tr>
<tr>
<td>Sunken soft spot of the head</td>
<td>Headache</td>
</tr>
</tbody>
</table>

**What to do:** Talk to your healthcare provider. Provide fluids such as water, juice, milk, or drinks with added electrolytes.

**Signs of severe dehydration**

<table>
<thead>
<tr>
<th>Babies and Children</th>
<th>Adults</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sleepiness, lack of energy, very fussy</td>
<td>Not peeing, dark yellow pee</td>
</tr>
<tr>
<td>Sunken eyes</td>
<td>Feeling dizzy, sleepy, no energy, confused, or irritable</td>
</tr>
<tr>
<td>Cool, discolored hands or feet</td>
<td>Rapid heart rate, breathing</td>
</tr>
<tr>
<td>Urinates 1-2 times per day</td>
<td>Sunken eyes</td>
</tr>
</tbody>
</table>

**What to do:** Go to an urgent care clinic or the emergency room immediately.
Diarrhoeal disease is the second leading cause of death in children under five years old and handled the deaths of 370,000 children in 2019. The most severe threat posed by diarrhoea is dehydration. During an episode of diarrhoea, water and electrolytes including sodium, chloride, potassium, and bicarbonate are lost through liquid stools, vomit, sweat, urine, and breathing. A person with diarrhoea becomes dehydrated when these losses are not replaced. In addition, diarrhoea is a major cause of malnutrition, making the person more susceptible to future bouts of diarrhoea and other diseases.

There are three clinical types of diarrhoea, each with its specific treatments: Acute watery diarrhoea, which may last several hours or days and includes cholera. Acute bloody diarrhoea, also called dysentery. Persistent diarrhoea, lasting 14 days or longer.

In the past, for most children, severe dehydration and fluid loss were the main causes of death from diarrhoea. Now, other causes such as septic bacterial infections are likely to account for an increasing proportion of all diarrhoea-associated deaths.

Exclusive breastfeeding is protective and prevents diarrhoea from occurring in young children. Breastfeeding also reduces the severity of diarrhoea.

Key measures to prevent diarrhoea include the following: access to safe drinking water. 2. use of improved sanitation.3 hand washing with soap.4. Exclusive breastfeeding for the first six months of life. 5. Good personal and food hygiene.6. health education about how infections spread.7. rotavirus vaccination.

Key measures to treat diarrhoea include the following: Rehydration with oral rehydration salts (ORS) solution: ORS, particularly the low osmolarity formula, are a proven life-saving commodity for the treatment of children with diarrhoea. Rehydration may require intravenous fluids in case of severe dehydration or shock. Zinc supplements reduce the duration
of a diarrhoea episode by 25% and are associated with a 30% reduction in stool volume. **Nutrient-rich foods:** the vicious circle of malnutrition and diarrhoea can be broken by **continuing to give nutrient-rich foods** – including breast milk – during an episode, and by giving a nutritious diet – including exclusive breastfeeding for the first six months of life – to children when they are well. **Consulting a health professional,** for the management of persistent diarrhoea, or when there is blood in the stool, or if there are signs of dehydration. **Adequate nutrition** is key to improving natural defenses, starting with exclusive breastfeeding for the first 6 months of life.

**Recommended treatment for acute diarrhoea**

Since 2004, UNICEF and the World Health Organization (WHO) have recommended treating childhood diarrhoea by replacing lost fluids through oral rehydration therapy. Along with continued feeding, oral rehydration salts (ORS) and zinc supplements are the recommended methods for treating diarrhoea.

**Source:** WHO/UNICEF Joint Statement: Clinical management of acute diarrhoea, 2004

**Enteric fever** is a febrile illness caused by infection with the gram-negative bacterium *Salmonella enterica* serotype *Typhi* (hereafter *S. Typhi*) or *S. enterica* serotype *Paratyphi* A, B, or C. Typhoid and paratyphoid fever may cause a mild illness manifested by fever, headache, and malaise, or a more severe illness manifested by prolonged high fever as high as 39° to 40° C (102° to 104° F), prostration, abdominal discomfort, bowel dysfunction, and altered mental status.

**Red flags for referral of patients of enteric fever.**

**Adults:** Two or more of the following: Altered mental status. Respiratory rate ≥22 breaths/min. Systolic blood pressure <100 mm Hg. The patient may be at risk of severe sepsis and needs higher level of care.

**Children**

- Looking sick and toxic
- Unable to take oral medication.
- Persistent vomiting
- Signs of severe dehydration
- Abdominal distension with or without tenderness
- Jaundice
- Drowsy or altered consciousness.
- Signs of gastrointestinal bleeding (such as passing fresh blood in stools or melaena)
- Signs of hemodynamic shock, including mottled skin and reduced capillary return.
- Seizures

Treatment of Enteric fever: Patients with mild illness can be managed as outpatients on oral antibiotics, antipyretics, oral hydration, and oral nutrition. Patients with more severe illness manifested by persistent vomiting, severe diarrhea, abdominal discomfort, and/or altered mental status require in-hospital monitoring with parenteral administration of antibiotics, fluids, and ancillary drugs. An oral live-attenuated typhoid vaccine and an intramuscular cell-free Vi capsular polysaccharide typhoid vaccine are available, and both vaccines are equally effective.
Tips for Healthy Summer

1. Move More, Sit Less!
   Get at least 150 minutes of aerobic physical activity every week.

   **TIP**
   Physical activity has immediate benefits for your health: better sleep and reduced anxiety are two.

2. Wear Sunscreen & Insect Repellent
   Use shade, wide-brimmed hats, clothing that covers, and broad-spectrum sunscreen with at least SPF 15 for sun protection.

   **TIPS**
   Use insect repellent and wear long-sleeved shirts and long pants to prevent mosquito bites and ticks.
   - Apply sunscreen before insect repellent. After you come indoors, check your clothing, body, and pets for ticks. Reapply sunscreen after 2 hours and after swimming, sweating, or toweling off.

3. Keep Cool in Extreme Heat
   Extreme heat can be dangerous for everyone, but it may be especially dangerous for people with chronic medical conditions.

   - Stay cool.
   - Stay hydrated.
   - Stay informed.

4. Eat Healthy Foods
   Delicious fruits and veggies make any summer meal healthier.

   **TIP**
   Healthy eating supports muscles, strengthens bones, and boosts immunity.

5. Choose Your Drinks Wisely
   Drink water (fluoridated tap or unsweetened bottled or sparkling) instead of sugary or alcoholic drinks to reduce calories and stay safe.

   **TIP**
   Add slices of fruit to water for a refreshing, low-calorie drink.

6. Don’t Use Tobacco
   You can quit tobacco today! Find the free quitting support that’s right for you.