Heat Exhaustion

If a patient shows the signs and symptoms of heat exhaustion, including heavy sweating, faintness, dizziness, rapid pulse, nausea, or muscle cramps, it is important to cool the patient and offer hydration.\textsuperscript{16} The patient should rest, and if signs of shock appear, you should treat the patient accordingly. Heat exhaustion is not as immediately life-threatening as heat stroke, but it can evolve into heat stroke if not addressed. Heat exhaustion results from overheating by being exposed to high temperatures, high humidity, and strenuous activity.\textsuperscript{16} Box 12-8 lists how to treat heat exhaustion.

Heat Stroke

Heat stroke also results from the body overheating, usually due to exposure to high temperatures for a prolonged period of time. If your body temperature rises above 104°F, you could suffer a heat stroke.\textsuperscript{17} Heat stroke is life-threatening, so first aid should be immediately administered if the signs or symptoms are present. These include a high body temperature over 104°F, an altered mental state or behavior, nausea, vomiting, flushed skin, rapid breathing, a racing pulse, a headache, and changes in sweating.\textsuperscript{17} If these signs and symptoms are observed, you should seek emergency aid immediately by calling 911. In the meantime, place the patient in a semireclining position, ideally in the shade. Remove outer clothing and monitor vital signs. Apply cold, wet compresses to the body, especially wrists, ankles, groin, axilla, and lateral neck. The patient should not drink anything if he or she is not alert or is vomiting. The patient may seize, in which case you should follow the seizure protocol. Box 12-9 lists how to treat heat stroke.\textsuperscript{17}

\begin{table}[h]
\centering
\begin{tabular}{|l|l|}
\hline
\textbf{Human Factors} & \textbf{Environmental Factors} \\
\hline
Advanced age (greater than 65 years old) & Uneven flooring \\
Impaired vision/hearing & Thresholds \\
Impaired balance/coordination & Throw or area rugs \\
Use of assistive device & Obstacles (eg, furniture, electrical cords, books, toys) \\
Medications & Pets \\
History of falls & Wet, icy, or slippery surfaces \\
Episodes of seizures or syncope & Steps, especially without rails \\
& No grab bars in bathrooms \\
& No anti-slip surface in tub \\
& Insufficient lighting \\
\hline
\end{tabular}
\caption{Risk Factors for Falls}
\end{table}

\begin{box}
\textbf{Box 12-8}
\textbf{Treatment of Heat Exhaustion}
\begin{enumerate}
\item Place the patient in a comfortable position in a shady or ventilated area.
\item Loosen or remove the patient’s outer clothing.
\item Monitor the vital signs.
\item Apply a cold sponge/compress to the forehead or neck.
\item Offer water or electrolyte solution to rehydrate (if the patient is conscious).
\item Observe the patient for signs of shock or heat stroke; contact emergency services immediately if the patient shows no signs of improving (loss of consciousness, refusal of liquids, vomiting, etc).
\item Have the patient rest for the remainder of the day.
\end{enumerate}
\end{box}

\textbf{Safety/Red Flags}

As already mentioned, the clinician needs to keep in mind the patient’s health history and be mindful of any signs or symptoms that display distress or injury. The therapist may need to adjust or decrease the intensity of the activity, or the activity may need to be changed altogether. The patient may need frequent rest breaks. The therapist should monitor the patient’s vital signs, especially if the patient has cardiac or respiratory issues. Some health conditions or the medications or treatments the patient is receiving for certain health conditions present as contraindications or precautions for treatment, so you should be aware of the medications the patient is taking and should know the patient’s basic past medical history. A therapist