Acclimatization is the process of the body adapting to new environment stressors, including temperature, humidity, altitude. The focus of this document is to provide information on heat acclimatization to keep athletes safe during the summer months when heat is most prevalent. It is recommended to train/play in the heat prior to competition in hot environments.

**Acclimatization process:**
- Should occur over the course of 1-2 weeks.
- 75-90 minutes of activity per day to increase core temperature to induce sweating
- Most effects seen in the first 7 days
- Optimal aerobic performance after 14 days
- Adaptations remain for 2-4 weeks following heat acclimatization

**How do we adapt to heat?**
The human body adapts to the heat in multiple ways. Some adaptations include:
- Decreased central (core) temperature
- Quicker onset of sweating to aid in cooling
- Increased blood plasma volume
- Improved cardiac efficiency
- Reduced oxygen uptake during activity
- Use of energy sources other than muscle glycogen to preserve energy stores

**Athlete safety**
During heat acclimatization, it is important for athletes, coaches, and parents to be aware of signs and symptoms of heat injury and that athletes are being monitored during activity.

Children and adolescents are at an increased risk of heat injury due to physiologic differences. This age group tends to:
- absorb more heat from their environment,
- have a lower sweating rate decreasing their cooling ability
- have a higher metabolic rate creating more heat.
- be exposed to more vigorous exercise during warm summer months (sports camps)
- not ask for hydration breaks when needed
- be more prone to peer pressure to tough out the heat

**Strategies to mitigate heat injury risk include:**
- Wear light and light-colored clothing
- Reduce time and intensity of activity based on environmental factors (heat, humidity, etc.)
- Longer recovery periods should exist between events to ensure proper hydration and body cooling occurs.
- Education of athletes, coaches, and caregivers about heat injury
- Ensure proper resources are available to immediately and rapidly cool athletes suffering from heat-related illness
References: