



# SUMMER CONDITIONING RECOMMENDATIONS

## **HEAT ACCLIMATIZATION**

### **What is heat acclimatization?**

- Heat acclimatization refers to biological adaptations that reduce physiologic strain (e.g., heart rate and body temperature), improve physical work capabilities, improve comfort and protects vital organs (brain, liver, kidneys, muscles) from heat injury. b. Heat acclimatization is specific to the climate and physical activity level.

### **How do you become heat acclimatized?**

- Heat acclimatization occurs when repeated heat exposures are sufficiently stressful to elevate body temperature and provoke profuse sweating. Physical exercise in the heat is required to achieve optimal heat acclimatization for that exercise intensity in a given hot environment.
- Generally, about two weeks of daily heat exposure is needed to induce heat acclimatization. Heat acclimatization requires a minimum daily heat exposure of about two hours (can be broken into two 1-hour exposures) combined with physical exercise that requires cardiovascular endurance, (for example, walking or jogging) rather than strength training (pushups and sit-ups.) Gradually increase the exercise intensity or duration each day. Work up to an appropriate physical training schedule adapted to the required physical activity level.

### **How fast can you become heat acclimatized?**

- Heat acclimatization requires about two weeks of heat exposure and progressive increases in physical work. By the second day of acclimatization, significant reductions in physiologic strain are observed.

### **What are the best heat acclimatization strategies?**

- Maximize physical fitness and heat acclimatization prior to arriving in hot weather. Maintain physical fitness after arrival with maintenance programs tailored to the environment, such as training runs in the cooler morning or evening hours.
- Integrate training and heat acclimatization. Train in the coolest part of the day and acclimatize in the heat of the day. Start slowly by reducing training intensity and duration (compared to what you could achieve in temperate climates). Increase training and heat exposure volume as your heat tolerance permits. Use interval training (work /r rest cycles) to modify your activity level.
- If the new climate is much hotter than what you are accustomed to, recreational activities (or yard work) may be appropriate for the first two days with periods of run / walk. By the third day, you should be able to integrate fast pace walking (20 to 40 minutes) at a reduced pace.
- Consume sufficient water to replace sweat losses. Heat acclimatization increases the sweating rate, and therefore increases water requirements. As a result, heat acclimatized soldiers will dehydrate faster if they do not consume fluids. Dehydration negates many of the advantages conferred by heat acclimatization and high physical fitness.



## HEAT ACCLIMATIZATION STRATEGIES

Strategy	Suggestions for Implementation
Start early	<ol style="list-style-type: none"><li>1. Start at least 1 month prior to the first day of practice.</li><li>2. Be flexible and patient: performance benefits take longer than the physiological benefits</li></ol>
Mimic the training environment climate.	<ol style="list-style-type: none"><li>1. Acclimatize in the heat of day.</li></ol>
Ensure adequate heat stress.	<ol style="list-style-type: none"><li>1. Induce sweating.</li><li>2. Work up to 90 minutes of continuous physical exercise in the heat. Be patient. The first few days, you may not be able to go 90 minutes without resting.</li><li>3. Once you can comfortably exercise for 90 minutes in the heat, then continue for at least 7-14 days with added exercise intensity. (Transition from walks to jogs. Interval training is best).</li></ol>
Teach yourself to drink and eat.	<ol style="list-style-type: none"><li>1. Your thirst mechanism will improve as you become heat acclimatized, but you will still under-drink if relying on thirst sensation.</li><li>2. Heat acclimatization will <u>increase</u> your water requirements.</li><li>3. Dehydration will negate most benefits of physical fitness and heat acclimatization.</li><li>4. You will sweat out more electrolytes when not acclimatized, so add salt to your food, or drink electrolyte solutions (Gatorade/Powerade) during the first week of heat acclimatization.</li><li>5. A convenient way to learn how much water your body needs to replace is to weigh yourself before and after the 90 minutes of exercise in the heat. For each pound lost, you should drink about one-half quart of fluid.</li><li>6. Do not skip meals, as this is when your body replaces most of its water and salt losses.</li></ol>



## INTERVAL TRAINING

Ideally, an athlete's training should mirror the physical demands of the sport they play.

Since football is a game of short bursts, interval training is recommended as a specific method of preparation.

One of the oldest training methods for interval training is called "Fartlek" training.

Fartlek, developed in the 1930's, comes from the Swedish for 'Speed Play' and combines continuous and interval training. Fartlek allows the athlete to run whatever distance and speed they wish, varying the intensity, and occasionally running at high intensity levels. This type of training stresses both the aerobic and anaerobic energy pathways.

Fartlek training can be performed almost anywhere by utilizing a stopwatch, a track or variety of landmarks such as mailboxes, telephone poles or cones.

### Recommended Training:

- Start the Week of July 4<sup>th</sup>
- 3 Days/Week (M-W-F)
- 35 Minutes Each Day
  - 5 Minute Jog
  - 5 Minute Dynamic Warm-up  
(*High Knees, Carioca, Goose Steps, Butt Kicks, High Knee Skips, Lung Walk*)
  - 20 Minutes of Fartlek
    - Sprint 10 Seconds
    - Rest 30 Seconds
  - 5 Minute Cool Down & Stretch  
(*Another good suggestion is to go to the high school track, sprint the straights and walk the corners.*)

## CORE & FUNCTIONAL TRAINING

The functional strength and core strength of each boy will be important this season as well. Basic calisthenics are great.

### Recommended Training:

- Start the Week of July 4<sup>th</sup>
- 3 Days/Week (T- Th - Sat)
- 10 to 15 Minutes each Day
  - Push Ups (Max in 30 Seconds)
  - Sit-Ups (Max in 30 Seconds)
  - Squat Thrusts (Max in 30 Seconds)
  - Wall Sits (3 Sets of 30 Seconds)
  - Mountain Climbers (3 sets of 30 Seconds)

Of course, this is still only youth football so you should not expect major training regimens like you would expect for college or NFL players.

However, the more prepared the team is coming into your first week of practice, the more they will enjoy the season. Being prepared physically will also help prevent injuries and lessen the likelihood of heat exhaustion during those first few weeks of practice.