



Submaximal Aerobic Conditioning & Maximal Aerobic Conditioning

Submaximal Aerobic Conditioning

Submaximal aerobic training focuses on improving an athlete's ability to sustain moderate-intensity work for longer periods. This type of training supports recovery between high-intensity efforts and helps athletes maintain work rate throughout training sessions and matches.

This type of conditioning is typically performed at a steady or moderately challenging pace and may include:

- Continuous pushing or skill-based drills
- Longer intervals at controlled intensity
- Extended game-based activities with limited rest

Submaximal aerobic work is particularly useful during early phases of training or as part of recovery-focused sessions.

Maximal Aerobic Conditioning

To improve maximal aerobic capacity, training must include periods of higher-intensity work that challenge the athlete's ability to repeatedly produce effort under fatigue. In wheelchair rugby, this is best achieved through interval-based training that reflects the intermittent nature of the game.

This type of training is commonly integrated into:

- High-intensity passing or movement drills
- Game-based drills (see below)
- Repeated sprint or shuttle-based activities

A commonly used and effective method is 15/30 seconds of high-intensity work followed by 15/30 seconds of active recovery, repeated over multiple bouts. The short recovery period allows partial recovery (particularly of the muscles) while maintaining an elevated heart rate, helping to develop aerobic power to a greater extent than continuous high-intensity pushing, and improve the athlete's ability to repeat high-intensity efforts during match play. This can be performed in different ways around the court such as pushing around the perimeter in alternating directions, or using a figure 8 style drill.

Example Work-to-Rest Ratios for Aerobic Development

Submaximal aerobic focus:

- 2–4 minutes work: 1–2 minutes rest
- Moderate intensity, continuous movement

Emphasis on maintaining quality and consistency

Maximal aerobic focus:

- 15–30 seconds' work: 15–30 seconds active recovery
- High-intensity efforts with controlled movement
- Focus on sustaining performance under fatigue

Game-based conditioning:

- 2–4-minute bouts of small-sided or conditioned play
- 1–2 minutes rest between bouts
- Emphasis on decision-making, movement efficiency, and recovery under pressure

Coaching Considerations

- Aerobic conditioning should complement, not replace, speed and power work.
- Training intensity should align with the goal of the session.
- Work-to-rest ratios should be adjusted based on athlete classification, fitness level, and time of season.
- Technique and movement quality should be maintained even under fatigue.