Performance Point

Designing General Preparation Conditioning Circuits

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Conditioning circuits are an excellent option as part of an overall plan for the general and specific preparation of athletes. The goal of general conditioning circuits is to take the athlete out of their regular cyclic or acyclic sports movements while still adding to their baseline conditioning. This is in contrast to specific conditioning circuits which target sports-specific actions in order to develop specific muscular qualities directly pertaining to the chosen sport. Since the principles of general conditioning circuits can be more widely applied across different sports and competitive levels, this article will focus on the development and application of this type of circuit.

Benefits of General Conditioning Circuits

As mentioned above, challenging an athlete with non-sports-specific movements can have the simple benefit of relieving the monotony of their usual sports actions. In this respect, general circuits are perfect for transition periods as they satisfy the adage of "a change is as good as a rest". Additionally, general exercise can help prevent or remedy muscle imbalances and avoid aggravating pattern-overuse injuries. Properly designed circuits can target the whole spectrum of muscular and cardiovascular qualities from muscular power to aerobic power. The general development of these qualities in the athlete can transfer to the specific sports actions with the resumption of normal sports training.

Important First Steps

While it is possible to design circuits around athletes' injuries, it is preferable that this is not the case. If the conditioning circuit is part of an off-season or pre-season program, an injured athlete is better served by targeted medical and rehabilitation work and simpler conditioning options that work around their injury. Once that concern has been cared for, the first step is introducing your pool of athletes to the core exercises of the circuits in a controlled, technique-focused environment. Taking at least 3 to 4 weeks to establish solid technique outside of the haste of a circuit workout will ensure your athletes are receiving the best benefits from the exercise once the pace has picked up. This baseline training also serves to develop physiological familiarization with the exercises so that faster movement speeds and more challenging repetition ranges can be applied effectively later on.

Targeting Your Circuit

Establish the quality that is desirable to increase in your athlete group and apply work to rest ratios specific to that quality. For example, if you aim to target muscular power, work periods of <15s should be pared with rest intervals of at least 100s for the same muscle group. If the aim is anaerobic lactic capacity, work intervals of 90-120s can be pared with rest intervals of equal duration. In many cases, a continuous circuit can be used with successive exercises targeting different muscle groups to allow for the proper recovery period of the prior muscle group.

Choosing and Arranging Exercises

Exercises in general preparation circuits should be compound (involving several joints at once) and not technically challenging. Technique degradation during fatigue can expose your athletes to a higher chance of injury and faulty movement patterns. General callisthenic type exercises (pushup, pull-up, squat, lunge, and core variations) and other tools such as medicine balls, resistance tubing, and pulling/pushing sleds are good choices for variety and ease of use. Non-resistance exercises can be added in as necessary, with running (flat, hills, stairs, cone patterns), skipping, rowing

machines, and spin bikes being good options. As mentioned above, the preferred situation is to shift the area being worked to allow for adequate recovery of each muscle group. A good progression would be to move through the following sequence: Lower body, upper body pushing, core, upper body pulling.

Fine Tuning

Some athlete groups benefit more from non-competitive circuits in which they can take their time to complete the desired repetition and exercise sequence. This situation does allow for more technique adjustments although the athletes may not gain the conditioning qualities you are targeting. Most athletes revel in the competitive nature of circuits and the best performer can shift dramatically from session to session if different conditioning prescriptions and movements are used. To objectively assess performance in a circuit, you can keep track of repetitions performed per time period or time to complete a specified number of repetitions. If the circuit is continuous and athletes are self-paced, the total time for the session can be tracked and athletes can compare themselves to their peers and also their previous times. It is very important though that technique and quality of movement are not sacrificed in the pursuit of a faster time.

Examples:

Muscular Power Circuit
Work interval: 10-15seconds, Rest interval between exercises: 15s
# of Cycles Through: 3 (2 minutes rest in between each circuit)
Performance Tracking: Repetitions Completed

Movement	Work Interval	Rest/ Exercises	Performance Tracking: Repetitions Completed		
			Round 1	Round 2	Round 3
Rebound Box Jumps	10 s	15 s	eg. 7	eg, 6	eg, 5
Medicine Ball Chest Pass	10 s	15 s			
Jumping Chin -up	10 s	15 s			
Medicine Ball Rotational Throw	10 s	15 s			
Alternating Lunge Jumps	10 s	15 s			

Anaerobic Lactic Capacity
Work interval: Dictated by repetitions (60-90sec), Rest interval between exercises: 0
# of Cycles Through: 3 (3 minutes rest in between each circuit)
Performance Tracking: Time for each cycle

Movement	Target Repetitions	Performance Tracking: Time(s)
Bodyweight Squats	50	
Ring Pushups	30	
Inverted Rows	30	
Alternate arm/leg plank	20	
Sled Drag (forwards)	30m	