SEQUENCING YOUR WORKOUTS

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With each daily workout conducted, a coach should have an objective in mind. Most coaches will look at two to three objectives per workout. More than two or three objectives, the athlete struggles and your objectives become watered down. When designing your daily workout, there is a sequencing of activities that has been recommended by a variety of researchers and coaches. The coach can look at the two or three objectives for the workout and place them in a sequence to get the greatest benefit.

Brent Rushall and Frank Pyke in Training for Sports and Fitness suggested the following order:
1. General Warm-up
2. Learn techniques and tactics
3. Perfect techniques and tactics
4. Develop Speed
5. Develop Power
6. Develop specific strength
7. Develop muscular endurance
8. Develop aerobic endurance
9. Recovery routine

Every coach should always have a warm-up and a recovery routine built into the workout, but how you put together the rest of the work out is extremely important as you will see.

1. Warm-up

We talked a great deal about Warm-up in the last issue of Olympic Coach (Spring 2007) and the value and the type of warm-up that should be conducted for the type of event or workout, so we will not focus on that in this article.

2. Learning techniques and tactics

One of the key concepts is the ability to learn a new skill. Fatigue affects the ability to learn skills. So in your sequencing it is important to place any new skills or re-visiting of previously learned skills early in your workout, so that the athlete is rested and not fatigued from the workout itself. Bompa explains "that learning is more effective when the nervous cell is still rested." A corollary to this is that the athlete must have sufficient recovery time when doing repeats of the skill.

What about residual fatigue? Let's say you had a real difficult workout the previous day and that the athlete struggled through the workout and is still fatigued for the next day's workout. This type of fatigue can also be a factor in the ability of the athlete to learn a new skill efficiently.

3. Perfect techniques and tactics

The athlete has an understanding of the skill, but you are trying to perfect the acquired skill and may be simulating competition. This works best in the early segments of the workout, again due to the fatigue issue. However, Bompa notes that "if the perfection of technique requires heavy and fatiguing work then such exercises may be performed later in the lesson, usually following speed exercises."

continued on reverse…

4. Developing Speed

Speed activities are of a high intensity (quality) and usually of short duration. Because the purpose of the work is to be of a high quality, the athlete should be rested. If they do the weight training or endurance first, they will be fatigued and unable to do the quality of work that is the objective, thus defeating the purpose of your workout. The skills section for that day might be eliminated if the focus of the workout is maximum speed.

5. Developing Power

Rushall and Pyke suggest that "activities that require speed and strength (power) should be next" in the sequence. Some of the power activities have a high skill component, so make sure you make that distinction and consider the fatigue factor when doing these activities.

6. Develop specific strength

Another key concept is to place any activity involving strength after activities involving speed, as "heavy loads impair speed" (Bompa). If you are trying to develop the strength component within a training session that includes other components, it is advisable to have the strength work have a "low number or repetitions with high resistance and full recovery between trials". (Rushall and Pyke)

7. Develop muscular endurance

Rushall and Pyke define muscular endurance as "the ability of specific muscle groups to sustain an activity for a short time in the face of considerable local fatigue". Resistance should be moderate in nature and begin with moderate level of repetitions. Depending on the condition of the athlete as well as their age and the sport, the resistance would remain moderate and the volume can be increased.

8. Develop aerobic endurance

Endurance work is very fatiguing, so it is reserved for the end of the sequence. The exception is if your sport is an endurance dominated sport, for example-- marathon running, triathlon or long distance swimming. Since fatigue is a limiting factor, it is important to achieve your objective for the workout in the beginning of an endurance session. The coach will see a diminishment in performance and can build that into the latter portion of the workout.

9. Recovery routine

Recovery is the most neglected part of training. What you do for recovery sets the stage for the next day and possibly the next weeks' workout. Athletes should engage in a cool-down and stretching routine upon completion of the workout. Coaches should carefully evaluate what they are having their athletes do for recovery. Nutritionally, we know the benefits of hydration and eating carbohydrates upon completion of workouts to recovery.

References:

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