



Comment [e1]:

### **THREE OF A KIND**

**Course 03: Coach Zeljko Obradovic**

**Lesson 20: Physical Conditioning**

**Language: English**

#### **PHYSICAL CONDITIONING FOR BASKETBALL**

Physical conditioning refers to the development and maintenance of athletic abilities that are necessary for players in order to improve performance and to remain fit throughout the season. Physical conditioning consists of the following physical abilities:

- Endurance
- Strength
- Speed
- Flexibility
- Neuromuscular Coordination

The physical conditioning training program is designed by the strength & conditioning coach in cooperation with the team's coaches and may be divided in three major periods: preseason, in season and off season.

#### **PRESEASON**

The preseason physical conditioning of a team is a very important element for the realization of the regular season's goals because during this period the players' individual physiological strengths and weaknesses are taken into account in order to set training loads and performance targets. Factors that influence planning are:

- Time requirements - usually 6 to 8 weeks
- Frequency of training sessions per week
- Days of single and double training sessions

- Off days for resting
- Number of training sessions held on-court and on a field
- Number and dates of practice games and tournaments
- Starting date of the regular season
- Players' preseason initial level of fitness

More specifically suitable training regimes for improving the above mentioned qualities are tailored to meet players' individual needs after conducting preseason biometrical diagnostics to establish baseline values for maximal aerobic power,  $VO_2$  max, anaerobic threshold, anaerobic lactic acid concentration and speed strength (= force output).

### **EXAMPLE**

A typical preseason preparation period consists of 3 training mini cycles:

a) during the first mini cycle (approximately three weeks):

- 50% of the training sessions on the field are dedicated to aerobic ability using the continuous or interval running at a predetermined heart rate for each player
- 30% is dedicated for anaerobic galactic endurance to fatigue
- 20% for speed strength

b) during the next mini cycle (approximately two weeks) the percentage for aerobic conditioning drops to 40% while the training sessions that improve speed strength and explosiveness are increased and contain sprints, plyometrics and neuromuscular coordination exercises.

c) during the last mini cycle (the remaining 1-3 weeks) the team participates in tournaments and therefore physical conditioning is limited to strength training.

Training concerning strength development during preseason preparation is held three times a week, targeting the increase of strength endurance, maximum strength and explosiveness with individualized programs for each player. For a solid training program throughout the preseason daily training sessions on the field should be well coordinated with basketball practices in order to maintain high intensity and volume. For example our team has established continuous running for 15-25 minutes as a warm up to any given basketball practice in order to increase the number of aerobic ability training sessions.

### **IN SEASON**

In season basketball practices are dominant and only a few, usually for recuperation, training sessions take place on the field. Typically physical conditioning is targeted at strength development with weights and takes place once or twice per week before or after basketball practice and is dependent on the team's game calendar and traveling schedule. However quite a few players choose to weight train more regularly.

In cases of null periods between regular season games physical conditioning is used on-court and/or on the field to maintain fitness levels. Overall it is quite important to maintain high intensity and rhythm during basketball practices in order to preserve the team's fitness level.

### **OFF SEASON**

During the off season it is important that the players recuperate physically, psychologically and mentally. Therefore if necessary a brief period of up to two weeks may be passive recovery (sedentary lifestyle). However an active recovery is preferred in order to maintain 50-60% fitness. It is recommended to engage in more general modes of training such as enjoyable cardiovascular workouts for 3 sessions of 20-40 minutes per week at 60-70% maximum heart rate. Resistance training should be relatively light with intensity ranging 50-70% of maximum strength for 2-3 sessions per week. Of course a more demanding training program is needed for players who must improve their basketball skills and develop their physical qualities.