

Basic Guidelines of Resistance Training

Resistance training programs for athletes should emphasize gradual increases in volume (total amount of work), intensity (level of effort) and or duration (exercise time) in an effort to improve overall levels of muscular fitness. Furthermore, Specificity of training should also be emphasized. This means the demands placed on the athlete during training should closely match the demands placed on the body during competition and practice. The following areas should be considered when designing any resistance training program focused on improving performance.

Body position –Increases in strength and power occur most effectively in the positions emphasized in training. In general this is why the majority of exercises selected for Hockey players should occur in a standing position utilizing free weight equipment (bodyweight, barbells, dumbbells, medicine balls, etc.).

Movement patterns – Increases in strength and power also occur to the greatest extent in the specific movement patterns used during training. Thus, Movements used during training should mimic the movements that occur during competition as closely as possible.

Speed of movement – Most athletic movements involve quick, explosive actions. As a result, training programs of most athletes should include explosive actions or movements performed with good body control and skill.

When designing a well-organized and structured resistance training program “periodization” allows the coach and athlete to maximize training benefits while reducing their risk of overtraining. Periodization involves dividing the training year into shorter cycles (usually 4 to 6 weeks in length) with specific goals emphasized during each cycle.

Endurance – Muscular endurance is the ability to repeatedly exert force over period of time. When beginning a resistance training program, or after returning to training, the athlete must first develop a solid conditioning base. Thus a muscular endurance training program that uses lower volume (sets x repetitions), lower intensity training to avoid excess soreness and fatigue is beneficial.

Hypertrophy – Hypertrophy is an increase in muscle size. Increasing muscular size can be beneficial for improving overall strength and power. For the pre-pubescent athlete significant gains in muscle size do not occur due to a lack of hormonal activity. For this reason, athletes will not begin seeing significant gains in muscle size until pubescence.

Strength –. In most sports the ability to generate high levels of power is critical for success. Because there is a relationship between strength and power strength gains have an influence on the amount of power an athlete is able to ultimately produce.

Power – The final off-season training cycle is typically a power cycle in order to bring sport-specific power to a peak just prior to the start of competition.

In-Season – During the season the o maintaining muscular fitness achieved during the off-season should be the main focus of resistance training. These attributes can typically be maintained with a lower volume of training as long as the intensity remains high.

Training General Guidelines

Principles	Endurance	Hypertrophy	Strength	Power	In-Season
Sets	2-3 sets	3-5	3-5	3-6	2-3
Reps	12-15 or more	8-12	4-6	1-4	3-10
Pace	Moderate	Slow	Moderate	Quick/Explosive	Quick/Explosive
Rest	15 sec to 1 min	30 sec. to 1.5 mins	2-5 minutes	2-5 minutes	1-3 minutes
Intensity	Moderate	Moderate	High	Very high	Very high to low
Volume	High	High	Moderate	Low	Very low