
The Exercises And Training Types In Boxing

The types of training outlined above is centred specifically into improving the overall skills and attributes of a professional boxer. The methods are chosen based on the specific needs of the boxer to gain an advantage and perform well. In terms of strength training, it is crucial to utilize weight training through free and fixed weights; and hydraulic resistance in order to incorporate isotonic, isometric, isokinetic and variable resistance contractions.

Free weights involve the replication of sport-specific situations through equipment such as barbells and dumbbells. Thus promoting stabilisation for the whole body as it involves various stabiliser muscles to control the weight by maintaining correct postural form and lifting technique resulting in the development of all muscles involved in their respective muscle groups.

Fixed weight derives from the use of weight machines and is beneficial for the isolation of specific muscles for their development through eccentric and concentric contractions, the utilization of circuit training works the athlete as incorporating multiple drills with little rest will maximize effectiveness.

Hydraulic resistance derives from the counter-resistance of movement either through the air or water compression and as speed increases, the greater the resistance. Each effort is made by a confrontation of an opposing force, as gravity does not assist the return of the action, thus the maximum ROM will be utilized.

The goal for this training program will prioritize improvement in strength through muscle hypertrophy; which enables the muscles to generate more power through weight training, stability and medicine balls, and lastly, muscle endurance; which the muscles and their groups to generate more force over a longer period of time and power, through the order of weight training, resistance band exercises and circuits. The power generated from punches are acquired from various muscles and groups however, I have compiled the significant muscle groups involved highly in boxing actions and defensive stances. It is paramount to work the shoulders; as power developed from the lower body and core all comes down to be filtered through the shoulder joint, requiring the deltoids to be eminently worked on, glutes; considering that they are the biggest muscles in your body, it is paramount to emphasize exertion on this due to the twisting movement of your punches and the rotation it requires to generate an abundance of power, lastly calves; provides assistance to the heels and toes in order to maintain control in the punching process, this incorporates footwork as, leaning your body in the direction of a punch will maximize the power generated.

On the subject of flexibility training, it is essential to apply in chronological order; dynamic stretches; to be done before exercises, followed by Proprioceptive Neuromuscular Facilitation (PNF) stretches, concluding with static stretches as a cool-down method. Dynamic stretches are paramount in the program as it replicates boxing actions through controlled, continuous movements to produce temporal stretches in which the position is not held, emphasizing mostly the speed and momentum which in turn warms up the muscle fibres and extends it to a degree of stretch which is required in boxing matches.

PNF stretches involve a combination of the contraction and relaxation of agonist and antagonist muscles with the intention to lengthen the muscle against a resistance through a progressive cycle of; static stretch, an isometric contraction and a period of relaxation in the lengthened position which is essential for boxing as it forcefully stretches the joints beyond active ROM.

Static stretches comprise of slow and smooth movements that provide mild discomfort where the muscle is stretched to its limitation for 30 seconds. This lessens the sensitivity of tension receptors within the muscle and concludes with relaxation. This, in turn, increases muscle length, thus it is essential for boxing which involves frequent stretching for prolonged periods of time.

These stretching exercises would aim to increase a joint's range of movement (ROM) to either an active or passive ROM in order to allow the boxer to use precise techniques required for the execution of skill; thus also affecting the prevention of injury caused by ROM which allows the joint to move through a larger angle before a sprain occurs such as fractures in the nose, wrists, or an orbital fracture which is frequent in boxing; also another effect would comprise of the stretching made on muscles and nerve fibres to interrupt the transmission of pain impulses. In addition, this allows the enhancement of movement, the reduction of muscle soreness and tension; due to the enhancement of circulation and lymphatic flow this speeds up growth and the repair of these cells; improvement of coordination between muscle groups, the enhancement of body and spatial awareness, and the improvement of cardiovascular performance. The major muscle groups involved specifically in the workouts composed are the shoulder girdle, comprising of the deltoids, latissimus dorsi and pectoralis; the core, through the rectus abdominis, obliques and spinal erectors; and lastly, the upper legs and hips through the quadriceps, hamstrings and glutes. In order to maximize performance, factors were taken into consideration on the environment of the program such as the temperature to suit an increased atmospheric and body temperature and specified joint workouts to ensure the maximal potential for the necessary joints involved in the exercises.

On the topic of anaerobic training, it is highly important to utilize short interval exercises with high intensities and short durations to simulate the boxing actions and movements of a boxing match followed by plyometrics. These methods focus on the strength, speed, power, and the agility of the athlete by incorporating mostly the anaerobic energy systems; alactacid system and lactic acid system. Most importantly, the build of muscle mass due to this training is paramount considering the weight requirements in boxing for the respective divisions. In terms of the enhancement of multiple factors, this type of training speeds up anaerobic glycolysis which allows faster ATP production and thus affects performance by allowing higher intensity activities to be performed longer. This, in turn, improves recovery rates, and thus allows for faster punches.

Short interval anaerobic exercises involve exercises under 2 minutes, requiring the maximal effort with short rest periods. Through the utilization of resting recovery, high-intensity activities are followed by short breaks before another high-intensity activity with specific alterations in the intensity levels. This enhances the ATP/PC and lactic acid energy system to supply energy under periods of intense activities due to a greater tolerance for the lactic acid created. The development of speed is paramount in these exercises with the objective of improving technique. Thus, incorporating the aspects of speed and agility. Examples are punching bag workouts followed by resting periods, sprinting (200m x 4; increased distance due to the demands of the multiple rounds in fights), and punch mitt workouts.

Plyometrics involve exercises that exert maximal force in short-fast intervals through a stretch-shortening cycle this utilizes the stretch reflex in order to produce an explosive muscular contraction (brief eccentric contraction) necessary for boxing due to the nature of boxing matches requiring the presence of explosive bursts. This incorporates the ability to apply a large degree of maximal strength in a very short period of time and thus replicates the physical demands of a fight as it trains the body to move quickly and explosively. Examples are skipping rope; at the maximal effort with the intention of perfecting the skill of footwork and endurance, plyometric push-ups; with the intention of increasing explosive abilities of the chest and shoulder muscles to utilize quicker punches, medicine ball passes; to increase the explosive abilities for the chest and shoulder muscles which are always involved in the punching action, medicine ball slams; to incorporate the upper body explosiveness together with the improvement of body stability and bounding; to emphasize leg power and strength by limiting the amount of periods that the foot spends in contact with the ground before a change in direction which is necessary for footwork in boxing.

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