

# **IMPORTANCE OF STRENGTH AND CONDITIONING IN BOXING:**

## **Benefits of SnC:**

1. It reduces risk of overuse/chronic type injuries
2. Gets you ready for your performance

## **Movement pyramid:**

3 layers:

1. Bottom: Foundation
2. Middle: Movement capacity
3. Top: Movement Competency, Skill, Boxing specific training, By coaches

## **Components of SnC:**

### **Mobility vs Stability:**

1. Mobility: Ankle, Hip, Thoracic spine
2. Stability: Knee, Lumbar spine, Cervical spine

Some joints have to be more stable and less mobile and vice versa

**Balance: Basic skills, coordination**

Strength: Required for maximal force; Split squat, Hip thrust

Power: Punching hard and fast using a medium load. Snatch, clean, medicine ball throw.

### **Energy System:**

1. Anaerobic Power: High intensity, short duration, absence of oxygen, Sprints; Full body circuit training, THR: 83-93 % of MHR

2. Aerobic Capacity: low intensity, long duration, presence of oxygen, Jogging, Allows us to recover quickly, Keeps you fit until the 3rd round.

Conditioning: Training the body to tolerate the demand of the sport;  
Activity:Rest ratio = 16:1;

3:1 in boxing

Agility: Reactive component, reaction time, quick change of direction or position, visual processing

### **Strength PRINCIPLES:**

1. Single leg squat

2. Split squat

Lower body: Maintain ankle knee and hip in the same line;

3. Deadlift

4. Romanian dead lift

5. Hip thrust

Hip strength; Important as boxing is an anterior dominant sport, back straight

6. Bent over rows

7. Three point dumbbell row

8. Shoulder press

Shoulder stability: It has to go hand in hand with our pulling muscles; donot shrug shoulder

9. Kneeling woodchop

10. Pallof press

11. Thread the needle

Core is very important

Increase repetitions/sets/challenge

12. Jump

-explosive power; good flat surface, proper technique and shoes, shoulder in line with the knee when landing

### **MYTHS/FACTS:**

1. Weight training doesn't make you slow if done with proper technique and mobility

2. It doesn't affect punching mechanics as it will in fact improve velocity and force

3. Conditioning should not be only boxing specific in order to have variability

Q: How many sessions of ST can be done by school going boxers?

A: Start with once a week and progress to twice a week and then three as they grow older. Start basic (stability, mobility, balance) not snatch and all. Do not overload them as they're in the growing phase.

Q: Can you suggest specific agility and reactions drills?

A: Use gym core, shadow boxing, specific cues of moving or punching at the target. Use external stimulus for boxing type agility.

Q: If a boxer receives a hard punch on the face, then the lower body becomes slow like footwork. How to deal?

A: If all the principles are covered then this problem can be taken care of. Work more on his lower body or explosive power. Simulating similar situation during training sparring.

Q: How to improve the reach?

A: Do all exercises at full Range of Motion (ROM) of the shoulder exercises and then work on coordination separately.

Q: Explosive exercises for boxers at home?

A: Explosive jumps, explosive push ups, Squat jump abound, single leg hops in various directions, broad jumps, jump over hurdles. If you're able to do all these properly then wear a back pack or bottle

and perform these exercises for added resistance. Make sure that the technique is CORRECT.

Q: How to breathe while doing Strength exercises?

A: Breathe in during concentric and breathe out during eccentric .  
Never hold your breath during exercise.

Q: Strategy for circuit training if the boxer is fatigued esp at the end of the session?

A: If technique is bad then stop. Choose exercises in the circuit training that are low risk like push ups, squat, plank.

Q: If we're working for anaerobic intensive interval method then intensity zone should be 90-95%;

If we're working for the same in repetition method then intensity zone should be 95-100%. According to periodization?

A: Test them like 5 minute Mass test ; see what is 100% for them and then train them at 80; they might improve in 2-3 weeks, then you can retest them and increase to 85% and so on.

Q: Should we go for ST during competition?

A: Go for power training during competition, for maintenance purpose. Not much volume, keep the intensity high. Squatting with 90 kg before competition and 3 sets, so during competition you can do less repetition less sets, also don't introduce new exercises during competition.

Q: DOMS is good or bad?

A: Talk to physiotherapist if it stays for prolonged period of time. Or other experts like nutritional etc.

Q: How to help with tightening of the anterior structures after ST?

A: The ratio of pushing and pulling exercises should be correct. Add mobility in warmups.

Q: Should we encourage ST with a wrong technique? And there are many boxer's who keep adding load even with wrong technique?

A: ST done wrongly won't benefit you rather will cause you harm, it will cause technical failure. So stop, decrease the weight, and continue , go to the higher load only if you can do a lesser weighted exercise with good quality of technique and at desired repetitions.

Q: Is unilateral ST exercise good for boxing?

A: Yes. The unilateral exercise develops Strength in that particular leg; strong side becomes stronger, weak side becomes weaker. We want the boxer to be strong in both legs. When you're injured you train that unaffected side, and it benefits the affected side as well.