RUSSIAN RUGBY

АКАДЕМИЯ РЕГБИ «ЦЕНТР» ФЕДЕРАЦИИ РЕГБИ РОССИИ

High intensity training during quarantine

Preventing injury on return to the club and maintaining speed and power

By Mark Bennett

What is likely to happen to strength and power during lockdown?

- Both strength and power have been shown to decrease significantly with 4-weeks of no training.
- The changes that occur in both upper and lower body power outputs during detraining are greater than changes in maximal strength.

Reference — Detraining and tapering effects on hormonal responses and strength performance (Izquierdo et al 2007)

The effect of detraining on injury risk

- After the 2011 NFL lockout there was an unprecedented increase in Achilles tendon injuries.
- Not only did the number of injuries increase dramatically, the injuries occurred mainly during the first 12 days of training. In other years they had been spread through the season. The average age of players getting injured was also different, falling from 29 to 23 years of age.
- Injuries will be an issue in Russian Rugby if we are not prepared to recommence training.

Reference — Did the NFL lockout expose the Achilles heel of competitive sports? (Myer et al 2011)

What do decreases in power and tendon injuries have in common?

- Training with high intensity neuromuscular loading is required to provide a stimulus to our muscles and tendons that promotes health and ensures they are strong enough to cope with the loads and demands of modern rugby training and competition.
- Training with high intensity neuromuscular loading is required to to induce and maintain the changes in muscular power that is so important for rugby performance.

Quarantine training

- General weight training (strength training and body building), slow running and circuits will not provide a sufficient stimulus to maintain power, prevent tendon injuries and protect muscles such as the hamstring.
- Sprinting, jumping and explosive exercises are essential to ensure performance and health on return to rugby and organised training.

How can achieve these stimuli during quarantine?

- The next two slides provide examples of a 2 very basic training sessions that can be carried out each week at home. A small outside area is needed to sprint.
- These will not maintain maximal strength, or aerobic fitness but they will develop muscular power and protect against injuries that may otherwise occur.

Day 1

A) Sprints.
B) Pogo jumps.
C) Skips for height.
D) Altitude drops.
E) Hamstring switches.

Day 2

A) Hill sprints (or sprints up steps).
B) Skips for distance.
C) Lunge jumps (no weight needed).
D) Lateral skater jumps.

Sprints

- Sprinting can be stressful and an injury risk if you are not adapted to running quickly. The following progressions will help you attain a suitable sprinting stimulus whilst lowering injury risk. A protracted warm up that includes progressive running is essential.
- Week 1
  - 4 x 10 metre sprints with 1 minute recovery.
- Week 2
  - 4 x 10 metre sprints with 1 minute recovery.
  - 2 x 20 metre sprints with 2 minutes recovery.
- Week 3
  - 4 x 10 metre sprints with 1 minute recovery.
  - 3 x 20 metre sprints with 2 minutes recovery.
  - 2 x 30 metre sprints with 3 minutes recovery.
- Week 4
  - 5 x 10 metre sprints with 1 minute recovery.
  - 4 x 20 metre sprints with 2 minutes recovery.
  - 3 x 30 metre sprints with 3 minutes recovery.

Pogo jumps

- Minimum knee bend, bounce using calves for maximal height.
- Week 1 — perform 3 sets of 6 repetitions with 2 minutes recovery.
- Add 2 repetitions to each set each week up to 12 repetitions.

https://www.youtube.com/watch?v=IMIHOEIQ_OM

Skips for height

- Maximal height the main goal.
- Knee should come to parallel.
- Each week perform 10 skips (5 each leg) for 3 sets, recovery is 2 minutes.
- As with all these exercises maximal effort cannot be maintained without the correct recovery.

https://www.youtube.com/watch?v=ztrAaKIOy_Y

Altitude drops or depth jumps

- Start with a low box and a soft landing (see videos) and progress to a high box with stiff landings.
- Week 1 — 3 sets of 5 repetitions, soft landing from a 30-40 cm box.
- Week 2 — 3 sets of 5 repetitions, soft landing from a 50-60 cm box.
- Week 3 — 3 sets of 5 repetitions, stiff landing from a 30-40 cm box.
- Week 4 — 3 sets of 5 repetitions, stiff landing from a 50-60 cm box.
- Recoveries should be 2-3 minutes.

Soft landing: https://www.youtube.com/watch?v=gwjjXpesbpO
Stiff landing: https://www.youtube.com/watch?v=WIw5LJn_L5o

Hamstring switches

- Difficult to describe — watch video.
- Recovery 2 to 3 minutes.
- Week 1 — 3 sets of 6 reps per leg.
- Add 2 reps per week until 12 reps per leg are performed.

https://www.youtube.com/watch?v=9Cn4TRjuY7Q

Hill sprints

- Run fast for 10–15 seconds. Recovery is a very slow walk back and stretching for 3 minutes.
- Week 1 — 6 reps.
- Week 2 — 8 reps.
- Week 3 — 2 series of 5 reps with 5 minutes between series.
- Week 4 — 2 series of 6 reps with 5 minutes between series.

Skips for distance

- Maximal distance the main goal.
- Knee should come to parallel.
- Each week perform 10 skips (5 each leg) for 3 sets, recovery is 2 minutes.
- As with all these exercises maximal effort cannot be maintained with the correct recovery.

https://www.youtube.com/watch?v=MjYUlyDIS2Q

Lunge jumps

- These are performed for maximal height, legs are changed in the air.
- Week 1 — 3 sets of 6 reps each leg, 3 minutes recovery.
- Add 2 repetitions each week until 12 repetitions are achieved.

https://www.youtube.com/watch?v=jgnm_8KgOwI

Lateral skater jumps

- Maximal lateral distance is the goal.
- Week 1 — 3 sets of 6 reps each leg, 3 minutes recovery.
- Add 2 repetitions each week until 12 repetitions are achieved.

https://www.youtube.com/watch?v=QHXkA2tK2Ss

Possible weekly training plan

- Monday — high intensity training day I.
- Tuesday — aerobic running and general strength training.
- Wednesday — Recovery.
- Thursday — high intensity training day.
- Friday — aerobic running and general strength training.
- Saturday — extra strength or aerobic work.
- Sunday — recovery.