## Recovery strategies

### What are they and why do we need them?

We all know how to train and like to push hard during our workouts. However, we tend to neglect the 'recovery' side which is probably the most important aspect of our training. Recovery has been the big 'buzzword' in strength and conditioning circles for quite some time yet continuous research keeps on improving these recovery techniques and practices. In order to maximise performance, an optimal balance between training and recovery must be attained. This will help to dissipate psychological and physiological fatigue and to 'peak' in performance.

> *Delayed onset muscle soreness (**DOMS**)* is a form of exercise-induced muscle damage which is characterised by stiff, painful muscles. It occurs about 24 hours after the bout of exercise and can last several days.

Our bodies function at a homeostatic level. When we exercise, we disrupt this homeostatic equilibrium. Therefore, recovery is needed to bring our bodies back into balance so we can bounce back stronger and recovered. This process, overtime, is called supercompensation. There are many basic techniques which aid this process and should form the foundation of your recovery strategy. **Good nutrition**, **quality sleep** and **hydration** are the most critical of these and if not followed properly, will result in inadequate recovery. I call these *first-tier* recovery strategies. These are non-negotiable and should form the foundation of your recovery routine. However, I will be exploring some *second-tier* recovery strategies in this article.

### ***Massage***

Massage is probably the most effective, tried-and-tested way of promoting recovery. It helps to increase blood flow and reduce muscle oedema (swelling caused by fluid build-up) in the tissues. According to research, massage therapy decreases DOMs for up to 72 hours after exercise! A 20 to 30-minute session is recommended immediately (or up to 2 hours) after exercise.

### ***Foam Rolling***

This form of self-manual therapy aims to reduce myofascial tightness and aches in the muscle tissue. The manual manipulation of this tightness increases blood-flow to the area allowing the muscle-tissue to soften and stretch. Some research claims that this technique reduces the sensation of DOMS following exercise. However, there is a lack of consensus over these claims.

Practically, if you feel the benefits of foam-rolling, 3-5 sets of 20-30 repetitions is what the current guidelines advise, although research is lacking in this area.

### ***Cold Water Immersion (CWI)***

This is probably the least practical method out there. There are many theories as to how the CWI mechanism works for recovery:

- Reduces the formation of oedema and pain sensation after exhaustive physical exercise.

- The hydrostatic pressure may facilitate the transport of fluids from the muscle to the blood and therefore eliminate metabolites.
- Vasoconstriction due to the cold temperature may reduce the blood flow to the damaged tissue which diminishes the inflammatory reaction which in turn may reduce the feeling of pain.

Exposure to cold water alone also has a direct pain relieving impact. Practically, the current research recommends 11-15 minutes in 11-15-degree water. This proves to be the optimal conditions to stimulate this regeneration process and maximise the anti-inflammatory benefits to reduce DOMS.

***Compression garments***

This is a newer form of recovery treatment that has been gaining a lot of traction from the big sporting brands. It is proving to be quite effective. The external pressure created by wearing tight clothing is believed to reduce the intramuscular space where swelling occurs. Therefore, this helps to prevent swelling (and consequent soreness) and improves circulation, helping to remove metabolic waste from muscles and stimulate the supply of oxygenated blood to help the muscle tissue repair and rebuild. While research still needs to be done in this area, especially with regards to the specific tightness of the compression wear, a good place to start would be to invest in a pair and put them on before you go to bed, after an intense workout that day.

***Active Recovery (AR)***

This method has similar effects to CWI on DOMS but no impact on perceived fatigue. AR strategies usually consist of aerobic-type, whole-body activities (e.g. tempo runs, cycling, rowing and swimming) performed at loads between 30% and 60% of your maximal heart rate. It helps stimulate blood-flow throughout the body which reduces metabolic waste and helps relieve muscle tension and pain through increased oxygen flow. This method and its effects on DOMS has been proven effective for over 30 years in the research field. AR should be done for at least 15 minutes after your exercise session for optimal effect.

***Static stretching***

This has been a standard strategy used throughout the world but contrary to popular belief, stretching does not help with recovery. Static stretching post-exercise decreases blood flow and might even lead to an increase in DOMS. While stretching does increase parasympathetic activity (rest and relaxation) which can be beneficial after a workout, from a recovery point of view, it doesn't help – the research is quite clear.

**Conclusion**

The consistent theme in each approach is to improve blood circulation to help remove metabolic waste in the muscles and increase oxygen and nutrient supply for faster tissue repair and regeneration. Overall, massage recovery proves to be the most effective at reducing DOMS, perceived fatigue and inflammation. CWI proves to be effective in managing perceived fatigue and reducing inflammation. However, practically, compression

garments are probably the most useful and accessible. At the end of the day, while there is still lots of research to be done, don't underestimate the placebo effects of these techniques as they can be quite powerful. Our bodies are unique and will respond differently to various approaches, so find a modality that works for you.

However, it's important to lay down a solid foundation. The *first-tier* of recovery strategies – **sleep**, **nutrition** and **hydration –** are crucial. The *second-tier* recovery strategies (mentioned above) will give you that extra 1-5% that you are chasing. If you want to get the most out of your workout and ensure that your body adapts and recovers from a session, a post-recovery workout strategy is essential to build into your routine.

References:


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