

Perform Ready

Physiotherapy & Exercise Medicine Clinic

5 Misconceptions of Training and Rehabilitation

As professionals working both within elite sport and private practice, we are regularly meeting people from a vast variety of backgrounds. Some have limited experience with injury, rehabilitation and training. Others such as professional sportspersons have vast, (often decades) of experience under their belt. Some of these present with pain, others do not. Regardless of experience of the people we work with, there seems to be an endless list of misconceptions related to rehabilitation and gym based training...

Here are 5 common misconceptions – hopefully you will find them interesting!

#1 Gun show: ‘What’s the best bicep curl?’

Preacher, z-bar, standing, seated... There are many ways to skin a cat, but which is the best way? As soon as you walk into any public gym there is a 99.9% chance that someone is doing some form of a bicep curl (especially when holiday season comes around) and why not? Electromyography is a ‘tool’ medical and sports science professionals use to assess the electrical activity in a muscle – simply put the more activity, the more muscle fibres used. So which curl is the best? The dumbbell preacher curl is often the ‘go to’ exercise for many gym goers, however this type of curl causes high bicep activity in a limited range of movement.

Winner: Incline seated dumbbell curl and standing dumbbell curl demand the highest bicep activity throughout a whole rep. This should be your go to ‘gun show’ exercise.

#2 ‘Sit back in the squat to protect your knees’

Focusing on restricting the amount your shins travel over your toes, by increasing the forward bend at your torso does reduce knee joint forces, however there is very little proof that these forces actually cause injury (much higher forces at the knees are created when we run!). What has been proven is that there are considerably greater compressive forces through your lower back with this increased forward lean which can lead to injury if we do not lift correctly.

#3 'The back squat is for yours glutes and hamstrings, whereas the front squat works your quad's'

Following on nicely from #2...There is a belief that the back squat demands more 'work' from the glutes and hamstrings than the front squat. On the flip side there is a common belief within the gym community that the front squat is predominantly a quad focused exercise... Whilst there is some truth to the back squat being the more glute and hamstring dominant exercise of the two, the muscle demands are not actually that different. Front and back squats both require high efforts from all these muscle groups. In actual fact it is the angle of the knees and hips at different stages of the squat that dictates which is the main muscle responsible for producing the movement – as the exercises are very similar this 'sequencing' isn't really that different at all...We would go as far to say that the front squat would be our lift of choice within a program (unless you are a competitive lifter), as it been shown to cause similar gains in strength to the back squat but causes significantly less forces through the lower back than the traditional back squat.

#4 Therapists Don't Heal People

As much as we might not want to believe it, **we as therapists do not heal people**. I have been giving this concept more thought following a patient treated in the clinic earlier this month for chronic lower back pain. Through both manual therapy and rehab we were able to

eliminate his symptoms of 20 years in two sessions. Given the severity and longevity of his symptoms, the patient was unsurprisingly very pleased and stated 'You've healed me!' I hadn't, far from it really, we had just given the brain and the body an opportunity to correct itself through the means of the manual therapy techniques I had used and the patients rehab exercises. Whatever systems of treatment or rehab used by therapists, the key is to give the body and brain 'opportunity.' It's all about getting changes to stick, not just about eliciting change quickly.

We all know the brain is KING. It pretty much controls and drives everything we do, from sleep to hunger, to emotions to movement. Relating to injury and pain, we know control of movement is highly important. Relating back to the example above, the patients lower back pain was traced back to a minor ankle injury 5 years previous to the start of his back pain. The brain had found a way to work around or 'compensate' for the initial ankle injury, changing what was happening at other joints in the body. In this case causing altered mechanics at the lower back. Could the lower back pain have been eliminated without looking at the ankle? Maybe so, but would that back pain have stayed away without treating the ankle? Likely not. We don't heal. We just give patient the tools to heal themselves and facilitate that process. The biggest and most powerful tool we have is the brain so we would be silly to omit it from our interventions.

#5 Stop stretching your 'tight hamstrings'

Hamstring symptoms, tightness and/or pain are a common occurrence within the active population amounting to a large loss of time from athletic activity. Many of these symptoms seem to reoccur despite good treatment and rehabilitation strategies. Question is: Why do these symptoms reoccur? The answer is finding out what is causing the problem in the first place. By only treating and rehabilitating the presenting symptoms i.e. the hamstring, you are

doing nothing to decrease the likelihood of further injury. We know the biggest precursor for injury is previous injury so the likelihood of reoccurring injury is more prevalent, which makes finding and fixing the cause of the symptoms the best way to manage an injury.

Probably the most common reason the hamstring break down is the fact that they are protecting some other issue. For example, they may be working hard to stabilise an issue in the lower back. In such cases the hamstrings will continuously stay 'ON' and struggle to switch off or relax. You can stretch them till the cows come home, but if they are protecting something else, they will never relax. Why would your body let them relax, if they are protecting you from further injury? **Finding the cause** of the symptoms, not just treating the site of symptoms is the only way to ensure re-injury does not occur.

This blog has been written by Andy Barker and Ben Harper, the current head and first team physiotherapists at the Leeds Rhinos. Hopefully it has helped dispel several misconceptions we see on a daily basis. For similar blog's or to contact the authors of this post please see www.performreadyclinic.com