



## COMMON GYM EXERCISES: BENCH PRESS, SHOULDER PRESS & SQUATS *WHAT ARE THE BEST PRACTICES?*

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Q&A with Jeff Bridges –Physiotherapist at Carlingford >> [View profile](#)

Although summer is over, and the post Easter feast hangover is subsiding, the winter months are a great time to get inside in the gym and shape up! It's great to see so many people wanting to go flat out in the gym, however I commonly see the detrimental side effects of over training, repetitive workloads and poor technique that can lead to injury and an unwelcome disruption to your training schedule!. It's worthwhile stating, that technique particularly associated with free weights is something that needs an ongoing focus as we develop our own strategies and commonly learn by observing others. I will discuss a number of common gym exercises that pose a vulnerability to our bodies and some simple tips that may assist you in staying clear of injury!

**Q: I am new to weight training, how do I go about performing the bench press?**

A: Bench press is universally the 'go to' exercise for many men in their attempt to reach personal strength goals and strengthen the chest area. Although women tend to stay away from heavy weights, similar principles apply with push ups. Whether it is with dumbbells or the bar, heavy repetitive bench press places high shearing forces on the shoulder joint. The shoulder joint is prone to injury due to its heavy reliance on muscles and ligaments surrounding the joint to maintain its stability. **When high shearing forces are placed on the shoulder that are greater than our ability to maintain stability, injury can occur.**

Common errors I see with the bench press are; Thumbless grip, unequal hand position, poor scapula (shoulder blade) awareness and control during movement, going too far down (places shoulders under high stress – particularly for people with pre-existing shoulder injury or are new to resistance work) and compensatory movements of the neck, lower back and shoulders under heavy weight or fatigue.



The best place to start with your bench press technique is lying on your back with a light bar (either a wooden or light

metal bar will do). Have a look at your hand position; is it equal left to right? I tend to use the serrated markings on the bar to gain feedback in regards to this. Start with your arms extended with your hands approximately shoulder width apart. At this position your shoulder blades should be slightly off the bench in what we call a protracted position. **As the bar descends towards your chest your shoulder blades should progressively retract and squeeze together at the bars lowest point. I would recommend for people starting out that they leave a couple of inches gap between the bar and their chest.** It is at this point where your shoulders and chest muscles are most vulnerable to injury so it is important that you have adequate shoulder stability, flexibility in the upper spine and pectoral group to achieve this.

Furthermore for the population that finds their lower back arches during the push phase it may be appropriate to place you're feet on the bench to keep your back in a neutral position. Although you may not be able to lift as much this will isolate the pectoral group better and will minimise further compensatory strategies such as shrugging of the shoulders which you should look out for! On a final note, breathing is important also, so inhale on the way down and exhale during the effort.

**Q: I have pain in the shoulder when performing heavy shoulder press, why is that?**

A: Like bench press, the shoulder press exercise is a dynamic movement of the arms into an extended position overhead. Under heavy load the shoulder is subject to forces and this can be adverse for the joint and structures surrounding it around it if the shoulder gets placed in vulnerable positions. If you are experiencing pain in the shoulder it can come from a number of structures which can be determined more specifically following an assessment with your Physiotherapist. These include muscles, tendons, ligaments, AC joint (the joint on top of your shoulder), shoulder joint, bursa (lubricating tissues), cartilage and more. In many cases therapists generally see inflammatory conditions as a result of irritation to the shoulder during and following weight training.

Main factors that lead to these issues are poor shoulder stability, muscular strength imbalances, excessive load, repetitive lifting (overtraining) and incorrect technique. In populations that have performed shoulder press exercises for an extended period of time, strength can increase dramatically in the powerful deltoids which can overpower some of the smaller stabilisers in your shoulder.

This can cause a pinching pain above shoulder height in which we call 'impingement', where structures (generally the rotator cuff tendons) are becoming impinged and inflamed due to muscular imbalance and poor biomechanics in the shoulder.

**I would recommend you see one of our therapists for an assessment and potentially some exercise modification/program to gain some headway on your issues.**

*The following pictures demonstrate an optimal position for the upper limbs to be in during the shoulder press action.*

*Note at the lowest point my elbows do not travel below the*



*level of my shoulder joint. As stated above, the shoulder is subject to injury below this particularly under heavier loads. The picture on the right demonstrates an approximate end point overhead, which looks to minimise 'impingement' pain as discussed above.*

**Q: If I have had back pain in the past, is it safe for me to do Squats?**

A number of factors come into play here. It really depends on the type of injury you have sustained; disc, joint, muscular, derangement, time since injury, whether it is long term vs. sporadic injury, and whether weight is to be used during the squat. Although the squat may seem like a simple exercise, technique is something that can be influenced by a number of factors including flexibility, strength (particularly in the gluteals, core and quadriceps), ankle joint mobility and a general body position awareness. When done right, the squat can be an effective tool in integrating the lower limbs and mid trunk section in a functional exercise that is useful for day to day life activities.

In regards to the question, the main back pathology that needs particular caution with the squat is disc injuries of the lumbar spine. When we injure the disc in the lumbar spine it usually comes about by repetitive bending, lifting or reaching where the spine is forced into a forward (flexion) position. You could describe the disc as a 'shock absorber' of the spine which works well when all the building blocks are nicely positioned on top of each other.

When we subject those discs to forces in which they don't like, they can bulge or protrude towards the rear, and as a result we experience pain, muscle spasm and in severe

cases referred pain which we describe as 'sciatica' (due to irritation to the nerves). Don't let this deter you however, individuals with disc injuries generally have a successful recovery, however treatment and a graded exercise program with your Physiotherapist would be best in regards to returning to exercises such as the squat following back injury.

The most common position to perform the traditional horizontal squat is on level ground with knees shoulder width apart and feet facing forwards or slightly outwards. I recommend using just your body weight to start with as you can gain more control and it's better for injury prevention, particularly for those starting out or who have had a break from exercise. Individuals that have tight ankle joints, muscular inflexibility (hamstrings, gluteals, and lower back extensors) and weak core stability will need to be aware of compensatory movements that can occur. You can see two classic position errors in the photos that follow.

One of the most important things I can recommend is maintaining what we call a 'neutral spine' position. This is the most optimal position for our spine during load so that forces are distributed from upper to lower body correctly without potential injury. Achieve this neutral spine position by tilting your pelvis as forward and back as you can. Find the middle point and try and maintain that lower back curve during the squat. So take notes: **do not over arch or bend your back during squats** as this is responsible for many lower back complaints.

If you feel you are quite restrictive in the ankle joints and you cannot get weight through your heels without falling backward or excessively bending your back, you may place a small board (1-2cm) underneath your heels. Remember your breathing also: **deep breath in on the way down and exhale during effort.** Brace your core muscles moderately and maintain a good spine position.



As demonstrated the spine is in a neutral position during the descent phase of the squat. Watch for either arching the back too far demonstrated in the middle picture, or leaning too far forward in the right picture. This will put a lot of pressure on those discs and muscles in your lower back.

As you can see performing the squat isn't as simple as it may appear, however with some fine tuning and simple cues it's a fantastic exercise to have in your program. Remember these muscles burn a lot of energy and speed up the metabolism so for those of you looking to burn off that Easter chocolate, the squat is great.

If you find yourself in the gym amongst Physio Fitness therapists, come and say hi, we would be happy to show you the ropes!