

REHABILITATION PROTOCOL

Please note: As with all broken bones, full support is required at all times. It is essential therefore, that ClaviBrace once fitted, is not removed for 6-8 weeks and is worn 24/7 OR until X-Ray proves union.

Da Vinci Medical Breakthrough Award Winner 2010

<p>For best results fit within 8 weeks of injury. Fit the brace to a natural comfortable position.</p>	
<p>IMPORTANT:</p>	<p>Avoid Ibuprofen as this inhibits new bone formation – if pain relief is required use Paracetamol.</p> <ol style="list-style-type: none"> 1. Do not lift arms out in front of the body or reach backwards at any time during the healing process. 2. Keep both injured and uninjured elbows close to the side of the body – this avoids movement likely to cause rotation and disturbance of the collarbone. Remember both are joined and movement on the uninjured side also affects the fractured side. 3. Keep the weight of the arm supported in an arm-sling at all times for the first 3 weeks– this reduces disturbance to the fracture and encourages tissue repair. 4. DO NOT RUN and AVOID LIFTING ARMS even on the uninjured side. 5. When a collarbone is fractured the trauma of the injury also causes ligaments and muscles to tighten and go into spasm. This also slows healing and increases risk of shortening to the clavicle. Wearing the brace helps combat this. <p>You may notice that soon after the brace is fitted - approx 10mins - the brace may appear loosened. This means that muscle spasm within the shoulder girdle is easing. By relaxing muscles local blood circulation and tissue repair is improved and healing is underway. Re-tighten again to a naturally comfortable position.</p>
<p>Day 4</p>	<p>Continue to adjust brace as required to ensure the fracture in the best possible position for healing.</p>
<p>Day 5 - 7</p>	<p>As spasm in the shoulder girdle relaxes, ensure shoulders remain in a braced comfortable position.</p> <p>Get plenty of rest and sleep. This will promote healing.</p>

Day 8 - 10	To prevent shoulder and elbow stiffness, flex the arm on the injured side gently downwards once or twice daily. To avoid rotation of the clavicle and possible re-fracture, <u>do not</u> raise the arm above waist level or allow the arm to fall forward away from the body i.e. when rising from a chair.
Day 14 (week 2)	2 nd X-ray – Please be aware that the x-ray may not show significant improvement from day1 – New bone formation is not particularly visible on X-ray. Continue flexion of the arm and increase frequency according to comfort level.
Week 3	Take the arm out of the sling for short periods; Use the good arm to assist the injured arm. Stretch the arm downwards as comfort allows – remember the new bone is still soft and ligaments and muscles are still repairing and cannot support the weight of the arm fully for any length of time.
Week 3 or 4 according to severity of fracture	Arm can be taken out of sling for longer periods. – Figure of Eight Brace can be loosened – keep the brace on to guard against accidental knocks and to prevent disturbance to the fracture. USE A BALL TO EXERCISE – Squeeze a sponge or tennis ball with gentle but even pressure, several times a day.
END OF Week 5	Remove brace – re-apply as shoulder begins to ache or when travelling or when there is risk of being jostled.
Week 6 - Return to work if not manual labour.	Your fracture is still soft. Gentle movements and massage of the surrounding area – NOT directly over the fracture can be carried out. Remember, do all rehabilitation exercises within tolerance.
Week 7+	Gradually return to activities i.e. Driving and be conscious that ligaments and muscles take longer to heal than bones. Increase exercise gradually as muscles strengthen.

STANDARD REHAB EXERCISE PROGRAMME:

Week 5/6 following removal of Brace

1. Pendulum exercises
2. Squeeze ball
3. Isometric exercises:
 - a. External and internal rotations with elbow at side
 - b. Arm abduction and adduction with arm at side
 - c. Arm flexion and extension with arm at side
4. Soft tissue treatments for associated shoulder and neck musculature for comfort
5. Cardiovascular training such as stationary cycling, walking, stair climbing, throughout rehabilitation period



Pendulum exercise

Begin this exercise by leaning forwards with your good forearm supported on a table or bench. Keeping your back straight and your shoulder relaxed, gently swing your affected arm in circles clockwise as far as possible pain-free.

Repeat the exercise swinging your arm counter clockwise.

Repeat 10 times in each direction provided there is no increase in symptoms.

Isometric exercises

During isometric exercises, contract your muscles without movement.

Internal/external rotation:

Rest your hand against a surface such as a door frame. Keep your elbow by your side. Press either the palm of your hand or the back of your hand, against the door frame with less than 50% of maximum effort. Hold for 10 seconds. Repeat 12-20 times.



Isometric shoulder internal rotation



Isometric shoulder external rotation

Abduction / Adduction

Rest the back of your hand against a flat surface, for example a wall, with your arm relatively close to your body.

Adduction

Press the back of your hand against the wall, using less than 50% of your maximum effort. Hold for 10 seconds. Repeat 12-20 times.

Perform adduction by placing a small rolled-up towel between your body and your elbow and gently squeezing your elbow against your side.

Repeat as above



Abduction (outward movement)

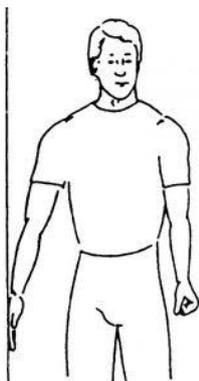


Adduction (inward movement)

Extension / Flexion

Gently push your elbow / fist against the wall, with your elbow bent, using less than 50% of your maximum effort. Hold for 10 seconds. Repeat 12 - 20 times.

Contact sports can be resumed at 5 months when a sufficient level of fitness has been attained.



Extension



Flexion