PHYSIOTHERAPY AND REHABILITATION

The physiotherapeutic approach is tailored according to the stage of the condition.

FREEZING

Low-grade (gentle) shoulder mobilisations within a pain tolerance, pain relief with modalities, gentle range of motion exercises.

FROZEN

High-grade shoulder mobilisations, pain relief with modalities, range of motion and gentle strengthening exercises.

THAWING

High-grade shoulder mobilisations, intermediate to advanced strengthening exercises.

SURGICAL INTERVENTION

If frozen shoulder does not respond to conservative treatment, arthroscopy surgery to release the scar tissues or manipulation under anaesthesia (MUA) are other options to consider. Following the surgery, a rigorous physiotherapeutic rehabilitation protocol to restore the range of motion and function will have to be followed.

TAKEAWAY

Full recovery of a frozen shoulder takes time, regardless of conservative or surgical management. Patience, endurance and resilience are of utmost importance during this recovery period.

KHPOON+PHYSIOTHERAPY



25-27 Joo Chiat Place Singapore 427751

www.rehaballiance.sg enquiries@rehaballiance.sg FB: Rehaballiancesg IG: @rehaballiancesg Main office: +65 6344 6345 WhatsApp: +65 8268 1603

FROZEN SHOULDER



Frozen shoulder is characterised by pain and subsequent stiffness followed by gross loss of all ranges to the shoulder joint. This condition often resolves on its own with complete or near complete restoration of range after many months.

The shoulder joint is supported by a strong band of ligaments called a joint capsule which helps to keep the joint in place. Within the joint capsule, there is synovial fluid (gel-like substance) which lubricates the joint, allowing the shoulder to move smoothly.

With frozen shoulder, the capsule appears to thicken and tighten up, and the amount of synovial fluid in the joint decreases. These factors contribute to initial restriction of movement which may affect daily tasks / activities such as:

- Overhead motions (washing/combing hair)
- Reaching behind your body
- Lifting and reaching motions

STAGES OF FROZEN SHOULDER

The course of frozen shoulder generally follows three main stages, which are often overlapping, rather than following clearly distinguished time frames.

"FREEZING" (6 WEEKS-9 MONTHS):

- Persistent pain (can be severe at times) and stiffness
- Sleep is disturbed
- Limited shoulder movement in all directions particularly external rotation

"FROZEN" (2-6 MONTHS):

- Pain is less intense except at extreme ranges of movement
- Shoulder stiffness remains

"THAWING" (9-36 MONTHS):

- Condition begins to resolve
- Minimal or no pain
- Gradual return of shoulder movement (may or may not fully return)

WHO GETS FROZEN SHOULDER?

Frozen shoulder appears to occur without specific or obvious reasons. However, it is observed that it is commonly associated with prolonged periods of reduced usage of the shoulder that may result during recovery from a surgery, fracture (collar bone, shoulder blade, upper arm) and rotator cuff injury where the shoulder may be in sling or brace.



Other contributing factors are:

- Gender affects women more than men
- Age usually affects those over 50 years old
- Underlying health conditions (diabetes, thyroid disorder, Parkinson's disease, cardiac disease, stroke)

CONSERVATIVE TREATMENT

- Nonsteroidal anti-inflammatory drugs (NSAIDs) for pain control and inflammation
- Corticosteroid injection
- Hydrodilatation injection (stretches the shoulder joint capsule) as performed by a radiologist
- Physiotherapy has shown to bring about active pain relief and recovery, restoration of range of motion, strength and return to daily activities

RADIAL SHOCKWAVE THERAPY (RSWT)

RSWT uses high pressure waves generated by the machine to stimulate blood circulation at the treated site (Grecco et al. 2013). RSWT has been found to significantly reduce the symptoms associated with chronic plantar fasciopathy and increase ankle proprioception sense (Weil et al. 2002, Akinoglu et al. 2017).

ICE APPLICATION

Freeze a plastic bottle filled with tap water. Place the bottle on the floor and use the sole of the foot to roll the bottle back and forth.

LIFESTYLE ADVICE

If your condition is painful, minimise long periods of standing and barefoot walking.

Your physiotherapist may teach taping techniques to support the bottom of your foot for pain relief.

KHPOON+PHYSIOTHERAPY

REHAB ALLIANCE PTE LTD 25-27 Joo Chiat Place Singapore 427751

www.rehaballiance.sg enquiries@rehaballiance.sg FB: Rehaballiancesg IG: @rehaballiancesg Main office: +65 6344 6345 WhatsApp: +65 8268 1603



Plantar fasciopathy is characterised by pain over the heel. The pain originates from the plantar fascia (tissue under the bottom of the foot).

The plantar fascia is a band of thick connective tissue that runs from heel to toe. It supports the arch of your foot and also acts as a shockabsorber in your foot.

SYMPTOMS

VARIABLE PAIN

People often complain of first-step pain when they first get up in the morning. The pain settles during the day and with exercise but is worse at the end of the day or after a lot of activity.

TENDERNESS

The underside of the heel is often tender when pressed.

MORNING STIFFNESS

People often complain of stiffness around the heel bone, particularly when they get up.





RISK FACTORS

- Foot arch deviations (flat foot, high arch)
- Being overweight / experiencing sudden weight gain
- Sudden increase in loading of the foot (prolonged walking, standing and running)
- Tight calf and foot muscles
- Inappropriate footwear (thin soles or lack of arch support and shoes with narrow toe box)
- Pre-existing medical conditions such as arthritis or diabetes

PHYSIOTHERAPY AND REHABILITATION

Physiotherapy will be aimed at pain relief and restoring function of the foot and ankle.

STRETCHING EXERCISES

According to research, plantar fascia stretching exercises were found to be superior to the achilles tendon-stretching exercises for the treatment of symptoms of proximal plantar fasciopathy (Digiovanni et al. 2003).

Such stretching is performed with a wedge or rolled-up towel under the toes.



STRENGTHENING EXERCISES

Both strengthening and stretching exercise programs significantly reduced pain and improved gait in patients with plantar fasciopathy (Thong-On et al. 2019).

Toe curls, heel raises, and resisted side-to-side movements of the ankle are some strengthening exercises that can be performed. Therapeutic exercises will be prescribed and tailored accordingly to each individual.

INSOLES

Silicone heel pads provide temporary relief by absorbing the mechanical impact exerted on the origin of fascia at the heel while walking.

Soft insoles worn in the inner arch of the foot provide support and reduce the tension throughout the length of the plantar fascia.

PHYSIOTHERAPY AND REHABILITATION

RECOVERY GOALS

- Education on independent self-management of pain, posture and joint protection
- Pain reduction using modalities
- Strengthen the core and lower leg muscles
- Improve knee joint sense, agility, balance
- Training for returning to sports
- Normalise knee functional activities such as stair-climbing, walking, squatting and running

SURGICAL INTERVENTION

Surgery may be considered if the below conditions are still an issue:

- Symptoms still persist even after 2-3 months of conservative treatment, especially locking of the knee
- The anterior cruciate ligament tear, which significantly affects knee stability

Following the surgery, a rigorous physiotherapeutic rehabilitation protocol to restore the range of motion and function will have to be followed.

KHPOON+PHYSIOTHERAPY



R

Z

ഗ

 \supset

N_S

Ш

Σ

REHAB ALLIANCE PTE LTD

25-27 Joo Chiat Place Singapore 427751

www.rehaballiance.sg enquiries@rehaballiance.sg FB: Rehaballiancesg IG: @rehaballiancesg Main office: +65 6344 6345 WhatsApp: +65 8268 1603

The meniscus is a C-shaped piece of tough, rubbery cartilage between the thigh and shin bone. It acts as a shock absorber and provides joint stability and lubrication.

There are two menisci sitting within the knee:

- Medial meniscus located inside of the knee; most often injured
- Lateral meniscus located outside of the knee; less frequently injured

TYPES OF MENISCUS INJURY

ACUTE TEAR (YOUNGER POPULATION) Usually involves cutting or twisting movements, hyperextension, actions of great force, especially in sport (e.g. soccer, rugby) or trauma (e.g. falls). It may be accompanied by anterior cruciate ligament injury (a ligament structure in the middle of the knee joint) in >80% of cases.

DEGENERATIVE TEAR (OLDER POPULATION) Such meniscal lesions lead to joint swelling, pain and mechanical blocking (Makris et al. 2011).





RISK FACTORS (DEGENERATIVE TEARS)

- Age above 60 years old
- Male gender
- Work-related kneeling and squatting and climbing stairs (greater than 30 flights) (Snoeker et al. 2013)

The meniscus consists of two zones:

- Red zone: Rich blood supply
- White zone: No blood supply

The location of the tear (red or white zone) determines the healing rate of the tear, since the supply of blood and nutrients is important in the healing process. If the tear is within the white zone, surgery is often required.

COMMON SYMPTOMS

- Persistent pain, more so with twisting or rotating of the knee
- Swelling or stiffness
- Difficulty in knee motion, especially knee straightening
- Catching / locking sensation in the knee when attempting to move
- Knee "giving way", feeling "loose"/unstable

CONSERVATIVE TREATMENT

Many small meniscus tears / injuries, be it partial, acute or degenerative tears, are successfully treated conservatively and monitored for two to three months.

To facilitate healing, you may:

- Use crutches for walking if it is painful
- Wear a knee brace for stability (as needed)
- Take nonsteroidal anti-inflammatory drugs (NSAIDs) for pain control and inflammation
- Platelet-rich plasma injection (injecting your own blood plasma into the injured area)
- Undergo physiotherapy for active pain relief and recovery, strengthening and return to daily activities and sport

EXERCISE THERAPY

Strengthening and endurance exercise show more benefits than stretching exercises, which are what people commonly believe they have to do when they experience neck pain.

For whiplash injuries, specific neck stabilisation exercises have superior benefits over a supportive collar for pain reduction (Rebbeck 2017).

Mobility exercises will be given to improve motion and joint sense in the neck, reduce pain and to improve function.

MANUAL THERAPY

Manual techniques include neck and mid-back mobilisation are found to be more effective if combined with active exercises (Walker et al. 2008).

KHPOON+PHYSIOTHERAPY

REHAB ALLIANCE PTE LTD 25-27 Joo Chiat Place

Singapore 427751

www.rehaballiance.sg enquiries@rehaballiance.sg FB: Rehaballiancesg IG: @rehaballiancesg Main office: +65 6344 6345 WhatsApp: +65 8268 1603 ECK PAIN

Ζ



Neck pain is a common complaint amongst middle-aged people. It has been estimated that 22% to 70% of the population suffer from neck pain with numbers continuing to increase (Praveen et al. 2014).

CONTRIBUTING FACTORS

- Prolonged postures (e.g. sitting at the desk)
- Muscle imbalances of the neck / shoulders
- Age-related neck joint degeneration
- Nerve compression
- Trauma or injury (e.g. falls, accidents)

TYPES OF NECK PAIN

Neck pain is categorised and managed based on different accompanying impairments (Childs et al. 2008):

- Neck pain with impaired mobility
- Neck pain with headaches
- Neck pain with movement coordination impairments
- Neck pain with radiating pain





RISK FACTORS

Certain factors that place you at risk of developing chronic neck pain (pain that lasts more than 12 weeks) include:

- Age of more than 70 years old
- Existing lower back pain
- History of neck pain
- Cycling frequently
- Loss of strength in hands
- Suffering from anxiety
- Poor quality of life
- Sedentary lifestyle

When we look down at our computers or phones, the deeper angles of head-bend, the higher the pressure that the structures in our neck have to withstand (The Orthopedic Sports Clinic 2019). Maintaining prolonged postures when using the computer or phone can potentially affect the structures in our neck and cause neck pain.

CONSERVATIVE TREATMENT

- Avoid / reduce / modify painful activities, such as prolonged postures; making ergonomic changes; limiting time spent on the computer and phone
- Nonsteroidal anti-inflammatory drugs (NSAIDs) for pain control and inflammation
- Physiotherapy for active pain relief and recovery and strengthening for daily activities

PHYSIOTHERAPY AND REHABILITATION

EDUCATION AND LIFESTYLE ADVICE Your physiotherapist will assess your lifestyle and potential contributing factors before being able to give advice about the nature of your neck pain and course of recovery. They may also give you coping strategies and lifestyle modification tips as needed.

You are encouraged to actively self-manage your condition, and to resume normal activities without anxiety, as far as possible.

TRACTION

Manual cervical traction along with physiotherapy showed immediate improvements in pain and range of movement of the neck (Sahasrabudhe et al. 2017).

PHYSIOTHERAPY AND REHABILITATION

RECOVERY GOALS

- Pain modification and inflammation control using exercises, modalities and massage
- Patient education (inform about the nature of injury and course of recovery, reassurance and coping strategies to change your pain behaviours)
- Lifestyle modification and advice on static postures and physical activity

THERAPEUTIC EXERCISE

General exercise therapy is effective in reducing pain and improving our body function. There is no one particular exercise that shows the results (Middelkoop et al. 2010).

Motor control exercises seem to be more effective than passive treatments in reducing pain and disability (Byström et al. 2013).

MANUAL THERAPY

Massage therapy is found to bring about more significant results when combined with exercises and education (Furlan et al. 2009).

Research has shown that is no significant improvement in function and pain reduction with spinal manipulation (Rubinstein et al. 2011).

Most importantly, adequate patient education should be given because patients' expectations are crucial in determining the outcome of the treatment regarding LBP (Eklund et al. 2019).

KHPOON+PHYSIOTHERAPY



REHAB ALLIANCE PTE LTD

25-27 Joo Chiat Place Singapore 427751

www.rehaballiance.sg enquiries@rehaballiance.sg FB: Rehaballiancesg IG: @rehaballiancesg Main office: +65 6344 6345 WhatsApp: +65 8268 1603 OWER BACK PAIN



Lower back pain (LBP) is a leading cause of activity limitation and absence from work globally. This condition is responsible for creating an economic burden on individuals, families, and communities (Hoy et al. 2014).

YOUR LOWER BACK

The lower back (lumbar spine) has five vertebrae (L1-L5). The space between the vertebrae is maintained by gel-like pads (intervertebral discs) that act as shock absorbers throughout the spine. The whole spinal column is supported by ligaments, tendons, and muscles. 31 pairs of nerves are rooted to the spinal cord to control the body movements and transmit signals from the body to the brain (National Institute of Neurological Disorders and Stroke 2020).





TYPES OF LBP

LBP is classified according to the duration of pain.

- Acute (< 6 weeks)
- Subacute (6-12 weeks)
- Chronic (>12 weeks)

GOOD NEWS

90% of all acute low back pain will recover within 6 weeks. After that time improvement slowed (Menezes Costa. 2012).

WHAT PROLONGS LBP

- Degree of mental stress (Choi et al. 2021)
- Dissatisfaction at work (BMJ, 2017)
- Fear/ pain avoidance (BMJ, 2017)
- Low mood (BMJ, 2017)
- Ongoing legal actions (BMJ, 2017)

MORE SERIOUS CAUSES

Sometimes, LBP can be a sign of something more serious, but these conditions are usually accompanied by other symptoms. For example:

- Cancer near the spine the pain is usually very severe at night. Worsens with compression and weight bearing
- Cauda equina syndrome nerve injury, may also cause incontinence, numbness to the anal region or leg weakness
- Spinal infection the pain is specific to a spot, with occasional fever and illness (Ingraham 2020)

CONSERVATIVE TREATMENT

ACUTE LBP

- Nonsteroidal anti-inflammatory drugs (NSAIDs), muscle relaxants, topical medication, heat for initial pain control
- Gentle exercises or movements
- Deep breathing exercises and DO NOT panic

CHRONIC LBP

Other than the steps taken in acute management, core and hip exercises, general exercises and physiotherapy for active pain relief and recovery are other options to treat LBP, depending on the source and severity of the pain.

If conservative measures fail to relieve pain, especially if there is nerve damage, surgery may be another option; however, outcomes following surgery may not always be successful.

REHABILITATION TECHNIQUES

Some rehabilitation techniques specific to PD are employed in physiotherapy. These include:

MOTOR LEARNING STRATEGIES

- Simplifying tasks to help focus
- Long and complex movement should be broken down into component parts
- Visual and verbal cues for feedback

EXERCISE TRAINING: LEE SILVERMAN VOICE THERAPY (LSVT PROGRAMME) - BIG

- Concept of neuroplasticity
- Exercises with larger amplitudes, bigger movement patterns
- Improves movement and confidence in moving safely (Gilbert 2015)

FORCED EXERCISE

- Requires considerably speedy movements e.g. fast cycling and boxing
- Improves the motor function and dexterity in PD patients as compared to voluntary exercises (Ridgel et al. 2009)

RELAXATION EXERCISES

Gentle rocking, slow, rhythmic, rotational movements of extremities and trunk.

KHPOON+PHYSIOTHERAPY

REHAB ALLIANCE PTE LTD

25-27 Joo Chiat Place Singapore 427751

www.rehaballiance.sg enquiries@rehaballiance.sg FB: Rehaballiancesq IG: @rehaballiancesg Main office: +65 6344 6345 WhatsApp: +65 8268 1603



$R E H A B^+$ ALLIANCE

Ο

 \cap

Parkinson's disease (PD) is a movement disorder involving degeneration of the brain, specifically the Substantia Nigra, the area of the brain that helps control movement and coordination.

PD most commonly affects individuals aged 50 and above. Young onset Parkinson Disease (YOPD) can occur in people younger than 50 years old.

CAUSES

The cause of PD is currently unknown, but some experts believe that it is a combination of genetic predisposition (ethnic background) and environmental factors. However, there is no strong evidence to prove any certain causes.

FOUR HALLMARK SYMPTOMS OF PD

- Bradykinesia (slowness of movement)
- Tremor (shaking)
- Rigidity (stiffness of arms, legs and trunk)
- Postural instability in the later stage (trouble with balance and high risk of falling)

OTHER NON-MOVEMENT-RELATED SYMPTOMS These other symptoms commonly occur in combination with each other.

- Loss of sense of smell, taste and appetite
- Cognitive problems (lose focus easily, slow thought process, slow speech)
- Micrographia (small handwriting)
- Sleep disorder and fatigue, mood and emotional disorders (depression, anxiety)
- Blank facial expressions, soft voice
- Stooped posture
- Freezing while moving or walking

TREATMENT

- Medication some examples: Levodopa, Carbidopa, Dopamine, Anticholinergic drugs
- Surgery deep brain stimulation, implants electrodes into part of the brain to try and decrease movement-related symptoms
- Other management Physiotherapy, occupational therapy, speech therapy





PHYSIOTHERAPY AND REHABILITATION

REHABILITATION GOALS

- Educate and communicate with patients and carers
- Ensure patients understand the importance of neuroplasticity principles:
 - Intensive practice
 - Complex movements and environment enrichment
- Sufficient repetition
- Improve body mobility/ flexibility
- Improve muscles strength, coordination, balance and endurance
- Reduce risk of falling
- Maximise function and maintain quality of life