

# WEAK IN THE KNEES

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It is quite common to hear complaints of pain in the knees with activities such as climbing stairs, jogging or even walking.

The causes of knee pain are plenty, ranging from overuse to an injury or a traumatic incident that happened years ago.

Having a sedentary lifestyle, being overweight or being involved in high impact sports or activities are all risk factors of knee pain.

Being sedentary can weaken your knee muscles and any additional weight may put pressure on the knee joints, thus increasing the rate of wear and tear.

Regular aerobic exercises such as walking and cycling are recommended as these can help to improve your fitness, plus reduce or maintain weight.

The knee joint is like a hinge, allowing one to bend (flex) and straighten (extend) it with very slight medial and lateral rotation. As it is one of the major joints supporting your weight, it is easily injured and prone to wear and tear with time.

References:  
 Thomas KS, Muir KR, Doherty M, Jones AC, O'Reilly SC & Bassey EJ on behalf of the Community Osteoarthritis Research Group. Home based exercise program for knee pain and knee osteoarthritis: a randomised controlled trial. *BMJ* 2002; 325:752  
 Roddy E, Zhang W, Doherty M, et al. Evidence-based recommendations for the role of exercise in the management of osteoarthritis of the hip or knee—the MOVE consensus. *Rheumatology* 2005; 44:67-73  
 Clegg DO, Reda DJ, Harris CL, Klein MA, O'Dell JR, Hooper MM, Bradley JD, et al. Glucosamine, chondroitin sulfate, and the two in combination for painful knee osteoarthritis. *The New England Journal of Medicine* 2006; 354:795-808

Having a sedentary lifestyle, being overweight or being involved in high impact sports or activities are all risk factors of knee pain.

The knee joint also consists of a group of muscles and ligaments as well cartilages to help support and protect it.

Regular exercises are important for health including healthy joints. A combination of flexibility, strengthening and aerobic exercises are essential to ensure that.

Exercises are usually prescribed to provide flexibility to the joint and ensure the muscles around the knee are strengthened.

Stretches of the quadriceps and hamstrings are essential to ensure the muscles around the knee are not tight such that it affects function. For example, someone with very tight quadriceps may not be able to squat down.

These stretches can be done every day – three repetitions with 10 seconds hold for each repetition. If you exercise regularly, you should carry out these stretches before, and especially, after you exercise.

It is also important to strengthen the muscles around the knees and hips as they help to provide stability and support. Leg exercises can be carried out at home at least twice a week with minimum equipment.

These include wall squats, leg raises and knee extension in sitting, as well as hip abduction, adduction and extension exercises.

However, it is recommended that exercises for knee pain should be individualised, taking into account age, overall mobility and function as well as other existing medical conditions.



# SHAPE UP WITH Leg strengthening stretches



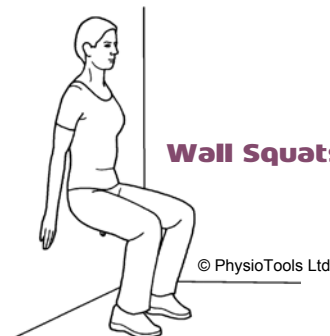
Leg raises



Extension



Abduction



Wall Squats



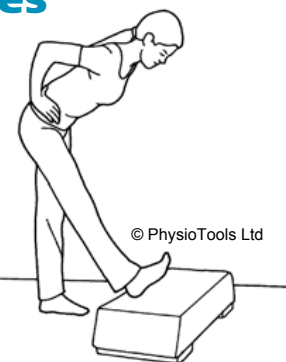
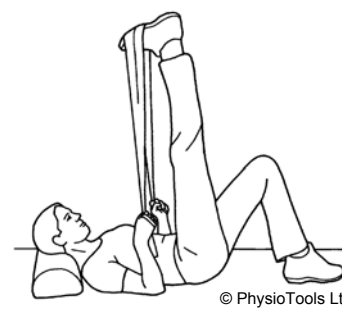
Adduction

Repeat these exercises 20 to 30 times and hold for 8 to 10 seconds each.

Knee Extension

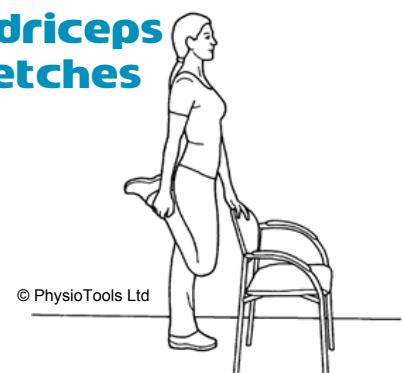


## Hamstring stretches



Repeat these exercises 2 times and hold for 10 seconds each time.

## Quadriceps stretches



## DO SUPPLEMENTS WORK?

There are advertisements promising a relief of pain with supplements such as glucosamine. Studies have produced inconsistent results from the effect of glucosamine sulfate on the treatment of osteoarthritis of the knee.

A recent study in *The New England Journal of Medicine* found that the combination of glucosamine hydrochloride and chondroitin sulfate may have some efficacy in people with moderate to severe knee pain, but not in those with mild pain. The same study did have a high placebo rate and most of the patients had only mild pain.

However, these supplements are safe to take with minimal side effects compared with steroids and pain killers.

**NOTE: These are general exercises and if the pain persists or if you experience pain during these exercises, do consult a physiotherapist to assess your knees and individualise your exercise programme.**