

## ORTHOPAEDIC SURGERY

# COMMON RUNNING INJURIES

Running is one of the most popular sporting activities in Singapore. If you're an enthusiast, take note of these common running injuries and tips on how to recover from them.



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### Runner's knee

Runner's knee, or Patellofemoral Pain Syndrome (PFPS), is irritation of the cartilage under the kneecap, resulting in pain at the front of the knee. This typically occurs after long runs, sitting for long periods, or while going down hills or stairs. Risk factors include overpronation (excessive inward rolling of the foot), and weak quadriceps or gluteal muscles. Solutions include:

- Taking extra rest days and reducing the running distance
- Post-run icing of the knee can provide relief
- Uphill running on a treadmill can be less painful than on roads
- Shortening the stride length and keeping the knees slightly bent when landing can reduce the load through the knee
- Strengthening the quadriceps and gluteal muscles through a dedicated rehabilitation programme is key
- During the recovery period, cycling, swimming and elliptical trainer are knee-friendly activities

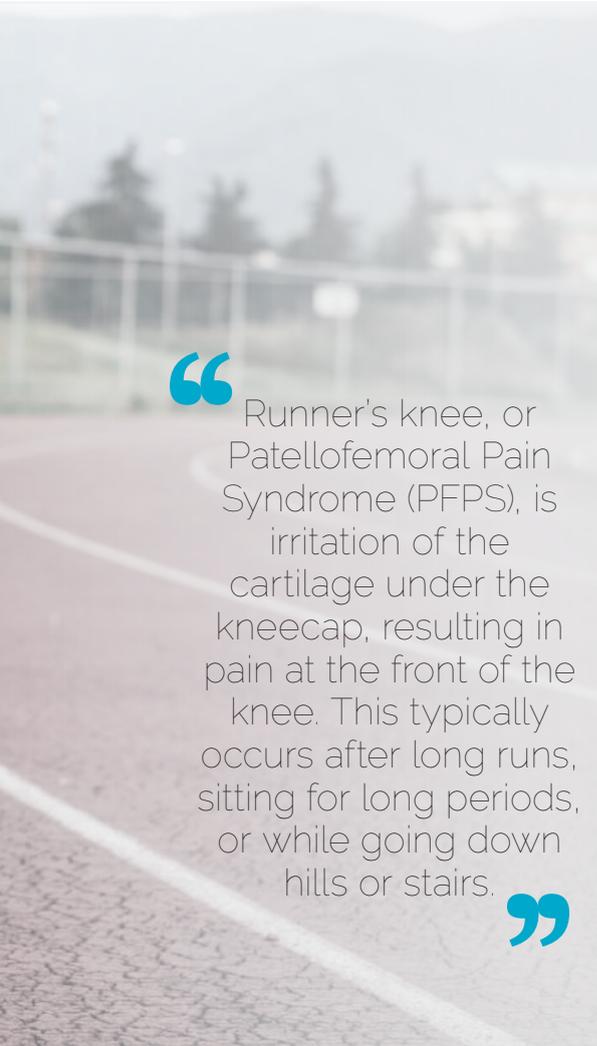
### Achilles tendonitis

The Achilles tendon connects the gastrocnemius muscles (two large muscles at the back of the calf) to the heel. Repetitive stress may cause inflammation of the tendon (tendonitis). Rapid increase in training intensity and duration, as well as weak or tight calf muscles are predisposing factors for Achilles tendonitis. Solutions include:

- No running through the injury
- Resting for a few days may allow an early sprain to heal quickly; running through the pain may develop into a serious case, which takes months to heal
- Eccentric heel stretching can help. Stand



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### Plantar fasciitis

A thick band of tissue in the sole of your foot, the plantar fascia connects your heel to your toes. Small tears in the plantar fascia cause pain along the heel and inside of your foot, particularly in the morning. Runners with excessive pronation or supination (rolling of foot inwards/outwards), abnormal foot arches, and rapid increases in mileage are risk factors. Recovery time with complete rest can take three months to a year. Solutions include:

- Stretching your plantar fascia by crossing your leg so your ankle rests on the other knee. Grab your toes and gently pull them back. Wearing a Strassburg sock at night will recreate this stretch
- Rolling your foot over a golf or massage ball while sitting at work
- Analysing your foot type at a specialist running store or podiatrist’s clinic
- Customising orthotics may help
- Correcting a weak core will improve posture and address spine issues
- Shockwave therapy has been proven to help; corticosteroid injections should not be a first-line treatment

### Hamstring injuries

The hamstring muscles are located at the back of the thigh, and help bend the knees. They may hurt when they are weak, overpowered by the stronger quadriceps muscles. The spectrum of hamstring injury includes sprains, which may take several days of rest

to recover, to a full-blown tear, which takes months to heal. Solutions include:

- Strengthening your hamstrings with leg curls, deadlifts, and hip extensions to prevent injury
- Improving stability through single-leg squats and lunges
- Strengthening the core with planks, bridges, and abdominal exercises
- Improving quadriceps and hamstring flexibility by stretching after workouts

### Shin splints

Shin splints, or medial tibial stress syndrome, refers to pain along the inner border of your shin bone, where muscles attach. They are common in new runners and indicate too much running too quickly, or the wrong type of shoes. Solutions include:

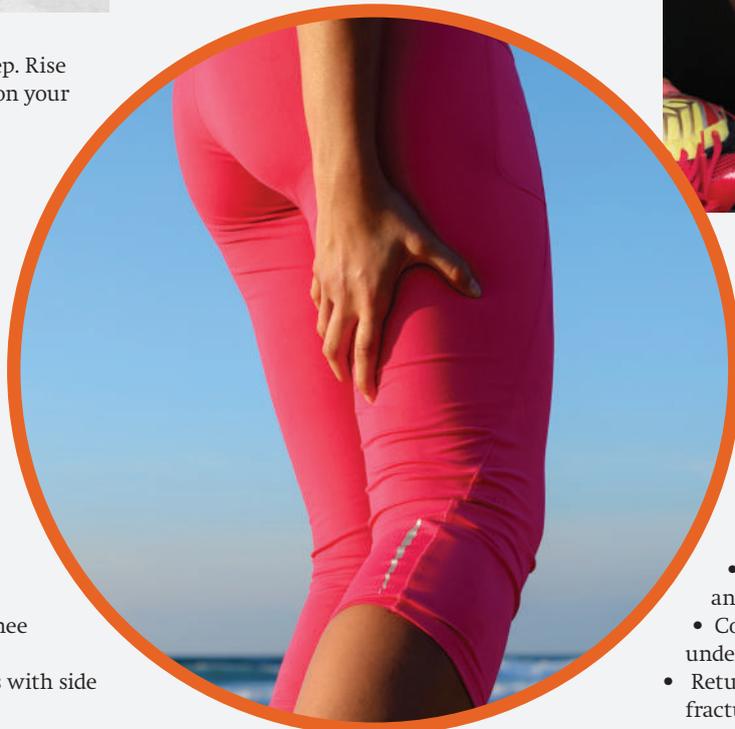
- Employing RICE (rest, ice, compression (taping/bracing), and elevation)
- Reducing mileage to a comfortable level, then slowly increasing by 10% per week
- Cycling/swimming while recovering



### Stress fractures

These occur through repetitive strain on the bone, and commonly occur in the shin, feet and heel. Overtraining is a major risk factor. Underlying conditions — such as nutritional deficiency, vitamin D deficiency, low bone density, and low calorie intake — can also be responsible. Solutions include:

- Resting completely from running and impact activities
- Consulting a specialist to rule out underlying causes
- Returning to activity gradually once the fracture has healed 🔄



with the balls of your feet on a step. Rise up on both feet, and lower down on your injured foot only. Repeat 20 times

- Avoiding cycling
- Wearing compression socks can help relieve symptoms during recovery

### Iliotibial band syndrome (ITBS)

The iliotibial band is found on the outside of the thigh, running from the hip to the knee. Running causes it to rub on the outside of the thigh bone at the knee, causing pain. Foot overpronation, weak hip abductor and gluteal muscles can contribute. Solutions include:

- Resting, and reducing the running distance
- Using a foam roller from hip to knee before and after running
- Strengthening your hip abductors with side leg lifts and one-legged squats