



LAKE COMO – ITALY



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## How Does Diabetes Affect Healing Times?

It can be surprising to many people that one of the questions their physiotherapist will ask them when assessing an injury is 'do you have diabetes'. This may seem more like an issue for your doctor than your physiotherapist!

The reason why your therapist is asking is that diabetes can actually have quite a large effect on healing times of body tissues. At times, injuries can take up to twice as long to heal properly in patients with diabetes and your physiotherapist will need to update their training and rehabilitation programs to factor this in.

### How does this happen?

From what most people know about diabetes, it seems strange that it would affect healing times. However, the more you understand about the processes that cause diabetes the more sense it makes.

It all comes down to blood flow. Our veins and arteries are made of flexible and elastic tissues that expand and contract when necessary to allow the optimum amount of blood flow to an area. Sometimes it is better for tissues to have less blood flow and other times they require more. This flexibility of the blood vessels is essential for controlling and modulating the amount of blood to an area at any given time.

When someone has diabetes, they have an excess of glucose in their blood. This occurs because the body is unable to regulate insulin, which is used to break down glucose and

provide the body with energy. This can be due to an autoimmune disorder that affects the cells that make insulin (Type I) or insulin resistance due to dietary choices (Type II). Over time, this excess glucose sticks to the blood vessel walls and they can become harder, losing their elasticity and ability to change size rapidly. Primarily this will affect the ability of the blood vessel to expand reducing the amount of blood flow available to the tissues. Diabetes can also affect the health of the nerves in they body, particularly in the hands and feet. This can result in poor sensation, which means that the person may not realize when the injury is being further injured.

### What does this mean for recovery times?

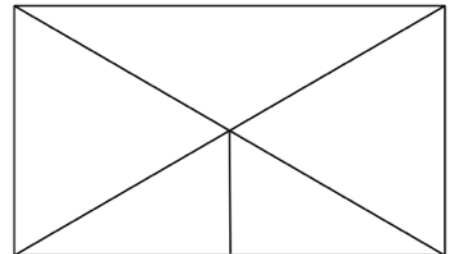
While not everyone with diabetes will have this issue, it is something that needs to be made known to your physiotherapist so they can be aware of the possibility. These changes are more likely to occur after having diabetes for a long period of time and if it is poorly managed.

**Ask your physiotherapist for more information on how diabetes may be affecting your recovery and for tips to ensure the best outcomes possible.**



### Brain Teasers

How many triangles can be made from this shape?



### Physio News

A great new app has been developed by an Australian physiotherapist to help you track your baby's milestones as they grow.

Check it out at  
<https://mieux.physio/>

### PhysioTip

The wrong footwear can make, hip, back and even knee pain worse. High heels are the worst culprits.

# LCL Tears

## What is the LCL?

The knee is one of the largest joints in the body and has only one plane of movement. This means it bends and straightens but does not twist (much) or move from side to side. To keep the knee from moving in other directions, the knee is supported by many strong ligaments, with two of these being found on either side of the knee. The inside ligament is the 'Medial Collateral Ligament' (MCL) and the outside one is the 'Lateral Collateral Ligament' (LCL). The primary role of the LCL is to prevent the lower leg from moving too far towards the midline in relation to the upper leg. Both the LCL and MCL are extremely strong ligaments and provide lots of support to the knee during movement however, they are still vulnerable to injury.

## How do tears happen?

The LCL is injured less often than the MCL, however tears do still occur. The most common way the ligament is damaged is through a force causing the knee to move inwards in relation to the upper leg, or a twisting of the knee. This can be seen in sports that involve changing directions or with a direct force, such as a rugby tackle. This injury can also occur from a simple fall and as with all sporting injuries, it is not only athletes who can be affected, anyone can tear their LCL in the right circumstances.

## What are the symptoms?

Following an injury to the LCL, common signs and symptoms are a 'popping' sound at the time of injury, immediate pain with weight bearing and swelling and a feeling instability. The severity of the injury will impact how much each of these symptoms are felt and LCL tears are classified as either Grade I, II or III, which helps to direct treatment. A grade I tear is where a few fibers of the ligament are stretched and damaged, a grade II is where this a partial rupture of the ligament with some instability of the knee and Grade III is a complete tear.

## How are LCL tears diagnosed?

Your physiotherapist is able to perform clinical tests to evaluate if there is any instability of the knee from an LCL tear. An MRI can confirm this diagnosis and an X-ray may be required to rule out any associated fracture. It is possible for nerve damage to occur at the same time as an LCL Tear, which will result in weakness and loss of sensation in the lower leg. Severe injuries are more likely to involve injury to other parts of the knee and your physiotherapist will make a full evaluation of all your injuries on assessment.

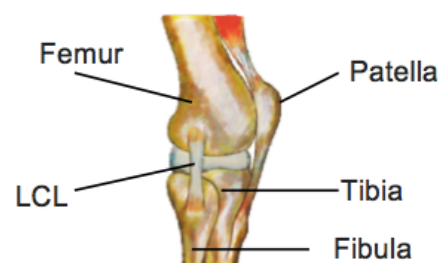
Most LCL tears are managed well with just physiotherapy and support of the joint, however severe tears and associated nerve damage may require surgery. Your physiotherapist and medical team will work together to help determine the best course of action for each individual injury.

## How can physiotherapy help?

For tears that don't require surgery, your therapist will advise you on how to best support and protect the injured joint. In the first 48 hours, RICE protocol (Rest, ice, compression, and elevation) is applied to reduce any pain, swelling, and inflammation. Following this period, you will be advised on how best to mobilise the joint whilst preventing any further damage. Return to sport will be dictated by healing times with a full recovery expected by 6-12 weeks.

Following ligament damage, balance, strength, and proprioception are often impacted and your physiotherapist will develop a program to address this, which is an important part of preventing further injury. Tears that are repaired surgically will require a longer program of rehabilitation and close liaison with the medical team.

**None of the information in this newsletter is a replacement for proper medical advice. Always see a medical professional for advice on your individual injury.**



Answers: 10 triangles can be found in this shape.

# Homemade Apple Crumble

## Ingredients:

### Filling

500g Apples, peeled and chopped  
50g Brown Sugar  
1 Tbsp. Plain Flour  
1 pinch ground Cinnamon  
1 tsp. Ginger, finely grated

### Crumble

250g Plain Flour  
150g Brown Sugar  
200g Rolled Oats  
250g Butter, melted  
2 Tbsp. Honey



1. Preheat oven to 180C/350F.
2. Place flour, sugar, and oats into a mixing bowl. Melt butter and add to bowl, mixing through dry ingredients until well combined.
3. Place filling ingredients in a saucepan with ½ cup water and cook on medium heat until apples begin to soften.
4. Grease an ovenproof dish with butter or line with baking paper and spoon in the fruit mixture and cover with crumble mixture. Drizzle honey over the top of mixture.
5. Place in the preheated oven and cook for 30-40 minutes until browned.
6. Serve hot, use custard, ice-cream or vanilla yogurt as an optional side.

Ready to serve for four.

  
Physiotherapy

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