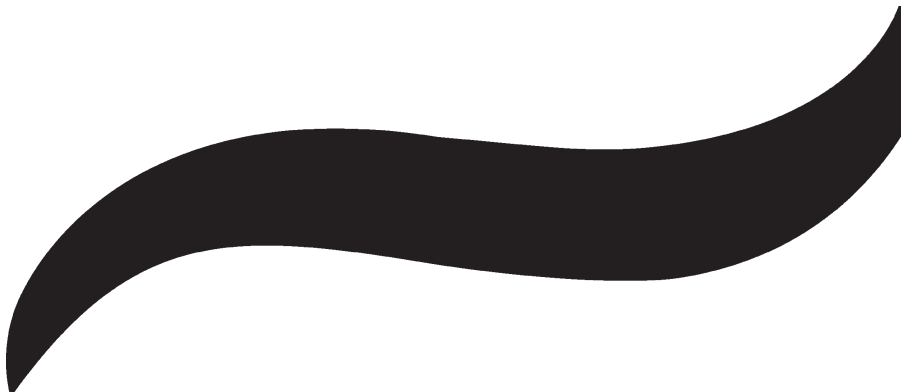




# Lesser Toe Deformities

Information for patients  
Podiatry



Lesser toe deformities are changes in the shape of any of the four smaller toes of your foot. These changes can often cause pain in the toe itself or can be uncomfortable when wearing shoes due to friction and pressure of the toes against the shoe. These changes are commonly seen in the second toe but can affect any of the lesser toes, leading to clawing, curling or overlapping.

Treatment protocols for lesser toe deformities almost always start with basic principles and we would encourage you to consider trying some self-help treatment.

## WHAT ARE THE LESSER TOE DEFORMITIES?

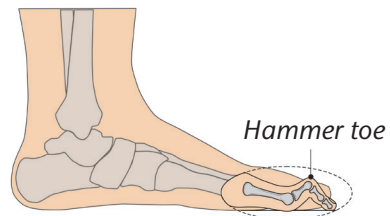
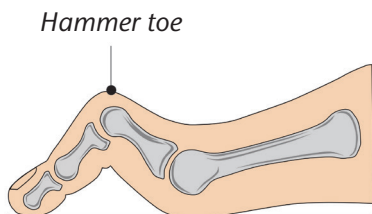
The most common lesser toe deformities are hammer, claw, mallet and overlapping toes.

They can occur due to an imbalance between the muscles and tendons within your foot that hold your toes straight.

These changes are usually flexible but can become fixed in their new position over time.

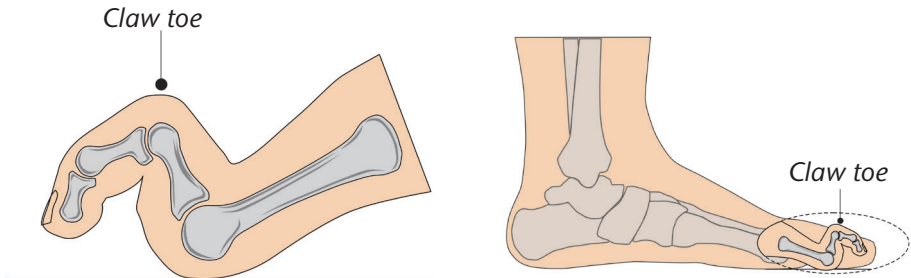
## HAMMER TOE

A hammer toe is when the proximal interphalangeal joint (shown below) bends down. Due to the change in shape this can result in a corn/callous developing on the top and/or tip of your toe. This is most commonly seen in the second toe but can occur in any of the smaller toes. If left untreated can become fixed over a period of time.



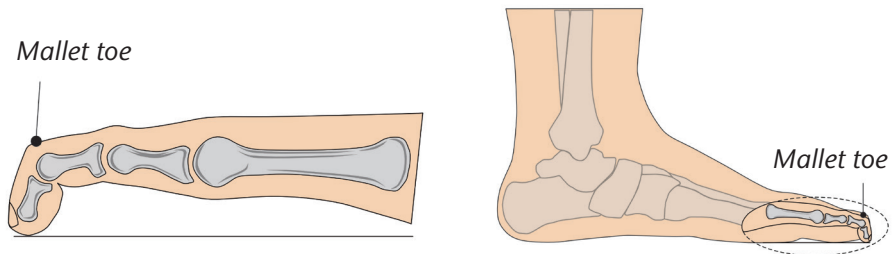
## CLAW TOE

A claw toe is when the proximal and distal interphalangeal joints bend down (shown below). Due to this change in shape, you may experience pain and calluses or corns over the top and/ or tip of your toe. If left untreated, the severity of the deformity can increase over time.



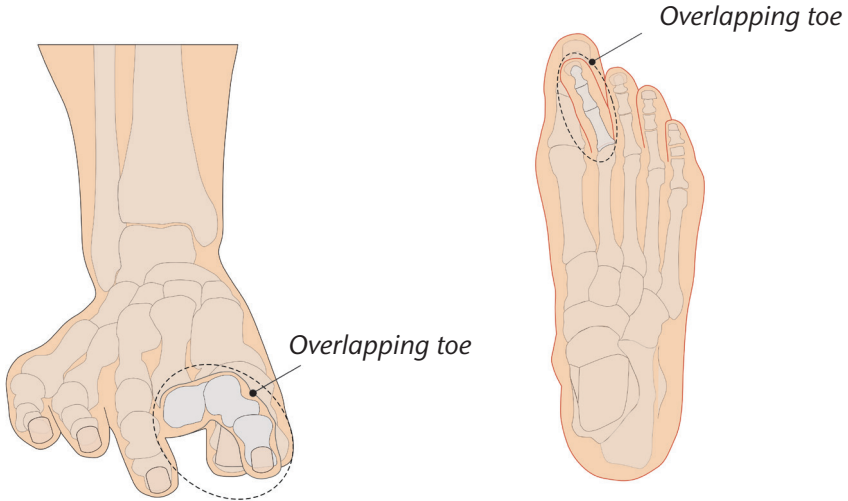
## MALLET TOE

A mallet toe is when the distal interphalangeal joint bends down, (shown below). Due to this change in shape you may experience pain and calluses or corns over the top and/ or tip of your toe. If left untreated it can become fixed over a period of time.



## OVERLAPPING TOE

An overlapping toe is often seen alongside a bunion but does not always involve the big toe and can be common in the fifth toe as well. This deformity can lead to discomfort and callous buildup over the top of the joints as well as increased pressure between and around the toes.



## Classic signs and symptoms of lesser toe deformities:

- ❖ Pain and callous and/or corns over the top of the joints of the toes
- ❖ Deformity in the shape of toe
- ❖ Shoes becoming uncomfortable over the toes
- ❖ Pain and callous underneath the tip of the toe
- ❖ Redness and swelling around the joint
- ❖ Stiffness in the joints of the toe
- ❖ Difficulty walking

## **WHAT CAUSES THE PROBLEM?**

The change in the shape of your toes occurs as a result of an imbalance between the muscles and tendons which hold your toes straight and those that bend the toes. There can be several reasons for these changes:

- ❖ Ill-fitting footwear
- ❖ Inflammatory conditions (e.g. rheumatoid arthritis)
- ❖ Trauma
- ❖ Hallux Valgus (Bunions)
- ❖ Neuromuscular conditions
- ❖ Peripheral neuropathy leading to a muscle imbalance

## **WHAT CAN I DO TO HELP?**

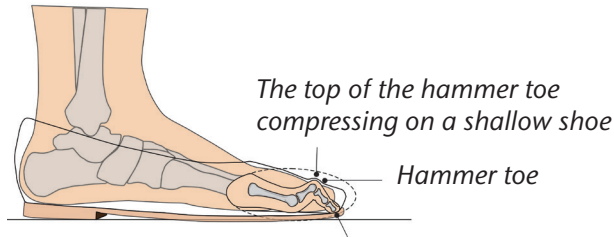
To improve comfort, you need to relieve the pressure on the toes and there are several ways you can do this yourself.

## FOOTWEAR

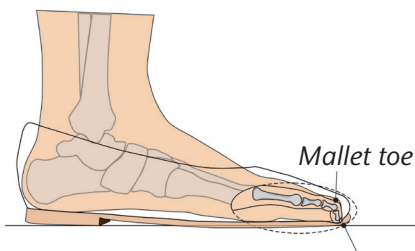
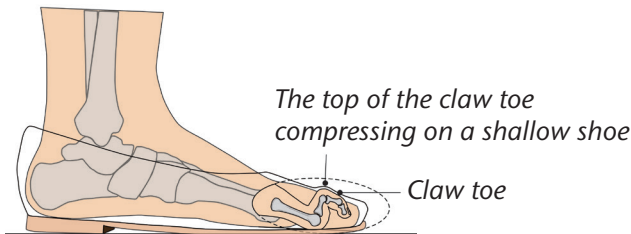
It is important that you choose footwear that is deep enough to accommodate any hammer toe or clawing deformities. It can also be useful to choose a shoe that has a softer material as the upper.

Softer materials can mould around the toes more easily than hard patent leathers. If your shoe is not deep enough, it will rub on the prominent joints causing the surrounding skin to become red, swollen and in some cases the skin can blister or become thickened.

Sometimes a fluid filled sac, called a bursa, can develop over the joint. The bursa can also become inflamed and painful.

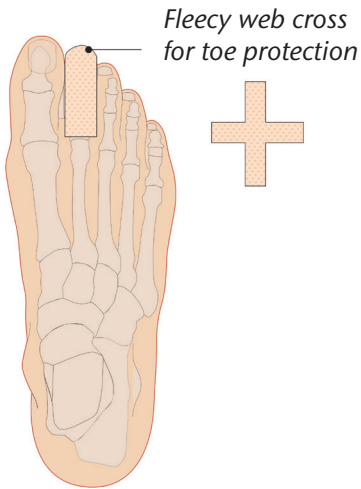


*Tip of the hammer toe squeezed on short shoe*



*Tip of the MALLET toe squeezed on a short shoe*

## TOE PADS AND SLEEVES



Over the counter pads and sleeves may help with comfort but ensure you have space in your shoe for these as they may make your shoe feel tighter. These can be used to help with pressure and friction to avoid the toes rubbing or pressing. These devices can be made from various materials and can be bought from your local pharmacy or online.

## PAIN MANAGEMENT

Pain medication can help reduce your symptoms, and allow you to move more comfortably. Your community Pharmacist can provide guidance on specific medication or other methods of pain relief (always read the label and manufacturer's guidelines).

## STRENGTHENING AND STRETCHING EXERCISES

Exercises can help to reduce the tightness in the muscles in the back of your leg and improve the flexibility in the foot and ankle.

### 1. Calf towel stretch

This exercise is designed to stretch the muscles in the back of your leg.

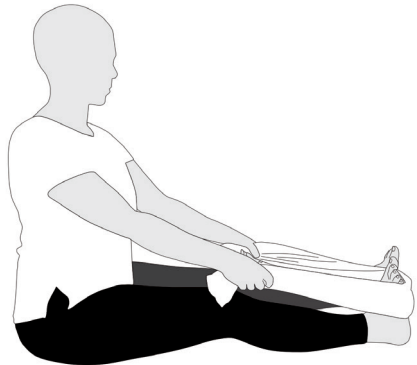
Start by placing a towel around the ball of the painful foot keeping your heel in contact with the ground and avoid bending your knee.

Pull the towel towards you until you feel a stretch along the bottom of your foot and the calf muscles in the back of your leg.

Hold the stretch for 30 seconds and repeat three times with a small period of rest in between stretches.

It is particularly useful to perform this stretch first thing in the morning and after periods of rest.

**If you feel this stretching exercise is making your pain worse then focus on the strengthening exercises.**





## 2. Standing Calf stretch

This exercise is done in two parts.

First support yourself by placing both hands shoulder height and width apart against the wall. Once supported take a step back with your painful foot. Make sure your heels are in contact with the ground and remain like this throughout this exercise with both feet also pointing forwards towards the wall.

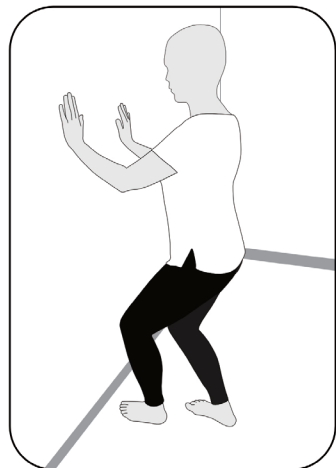
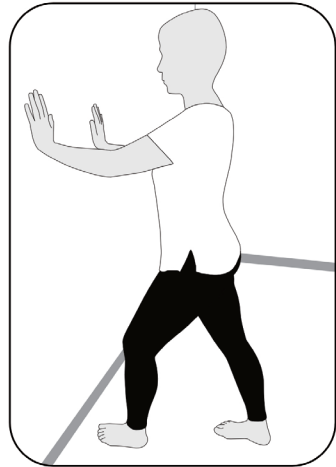
Now slowly begin to bend your front knee whilst moving your upper body towards the wall until you feel a stretch in the calf muscles in the back of your leg.

Hold the stretch for 20 seconds and repeat three times with a small period of rest in between stretches.

The second part of this exercise is designed to stretch the soleus muscle which is one of your calf muscles. Starting in the same position as before slide your painful foot towards the front foot as being demonstrated. Now when bending the front knee also bend the knee of the back leg until you feel a deeper stretch in the calf muscle. Like the other stretches make sure your heel is in contact with the ground throughout the exercise.

Hold this stretch for 20 seconds and repeat three times.

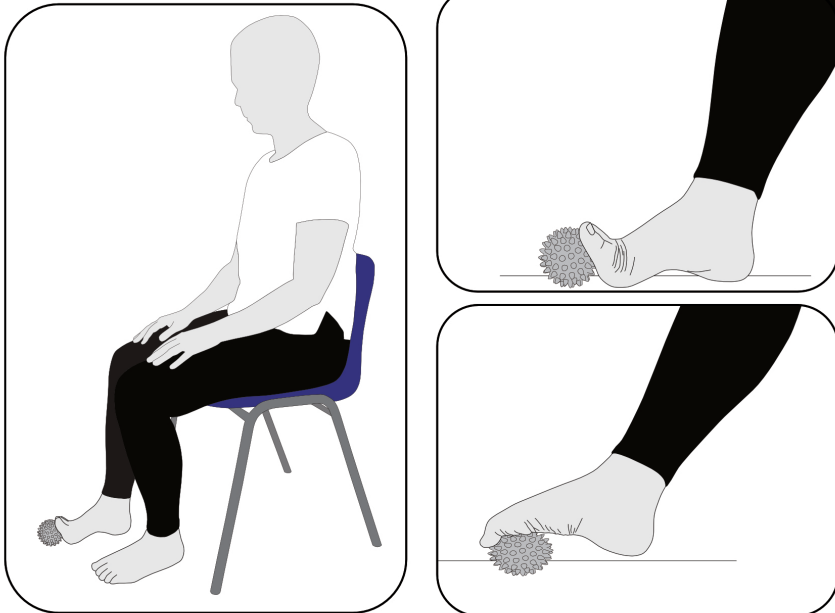
**If you feel this stretching exercise is making your pain worse then please focus on the strengthening exercises.**



### 3. Foot arch exercise

This exercise is designed to strengthen the muscles in the arch of the foot.

Sitting comfortably in a chair, flex your toes against the friction ball with your heel and ball of the foot placed on the ground.



Slowly lift your heel and start to roll the ball under your toes. Your toes must continue to stay in contact with the ball at all times. Hold this position for three seconds and then slowly roll the ball backwards to bring the foot back to its starting position. When rolling the ball back make sure your heel touches the ground first before the ball of the foot.

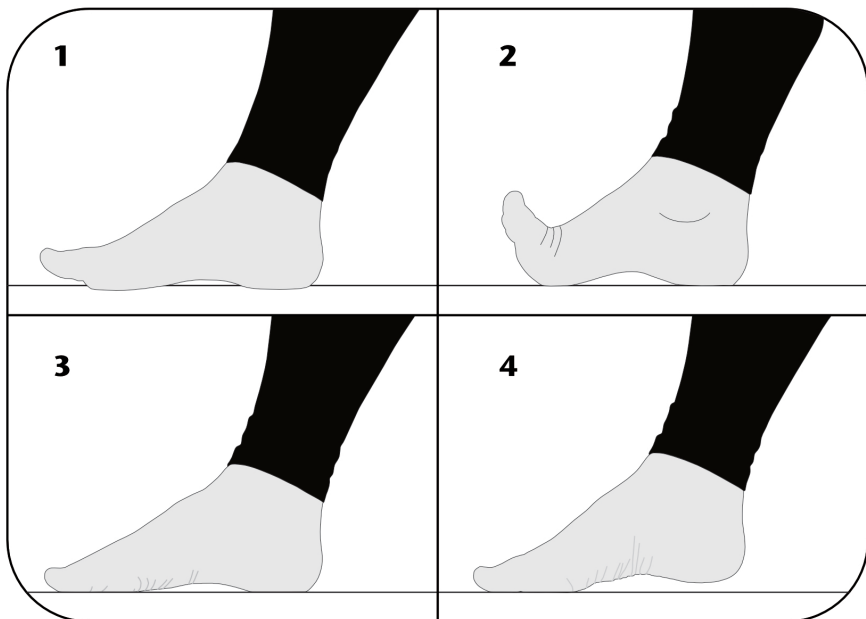
You should be able to feel the effects of this exercise in the arch of your foot and the muscles in the back of your leg.

#### 4. Toe motion exercise

This exercise is designed to strengthen the small muscles in your foot and can be done with or without footwear.

In a seated position place your heel and ball of the foot on the ground and lift your toes towards you holding this for five seconds. Slowly bring your toes back down to the ground. Now with the tips of your toes grip the ground and slowly lift your heel up very slightly. Hold this position for five seconds. Relax and bring the toes back towards holding again for five seconds. Continue to work between these two positions for 10 repetitions.

If you experience some cramping in your foot when doing this exercise you should reduce the number of repetitions.

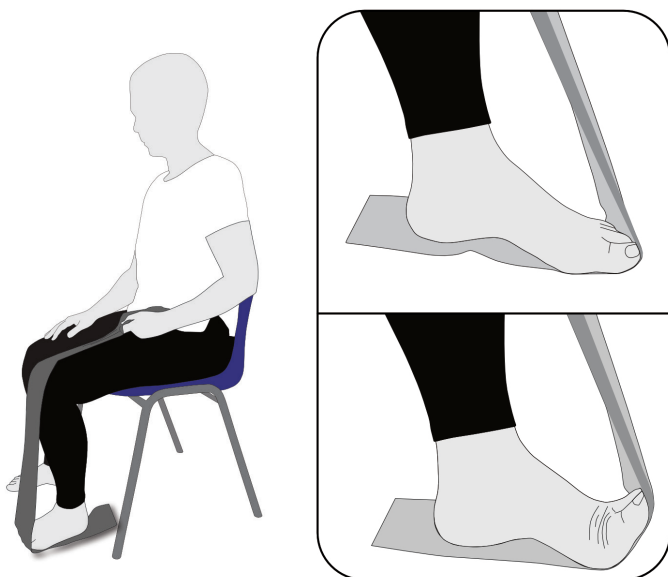


## 5. Intrinsic foot exercises (Theraband)

This exercise is designed to strengthen the small muscles in the foot. This exercise is performed in a seated position making sure your back is straight and leg bent comfortably at 90 degrees with your painful foot placed on a strip of Theraband.

Pull the end of the Theraband over your knee towards you which in turn will pull your toes up into a flexed position. Anchor the band on your thigh maintaining a good level of tension throughout the exercise. Hold the band tight and begin to slowly push your toes down towards the ground against the resistance of the band. When your toes reach the ground allow them to slowly raise back to their starting position.

You are aiming to do three sets of around 10-15 repetitions. You can adjust the difficulty of the exercise by creating more or less tension on the Theraband. Make sure your heel stays in contact with the ground throughout the exercise.



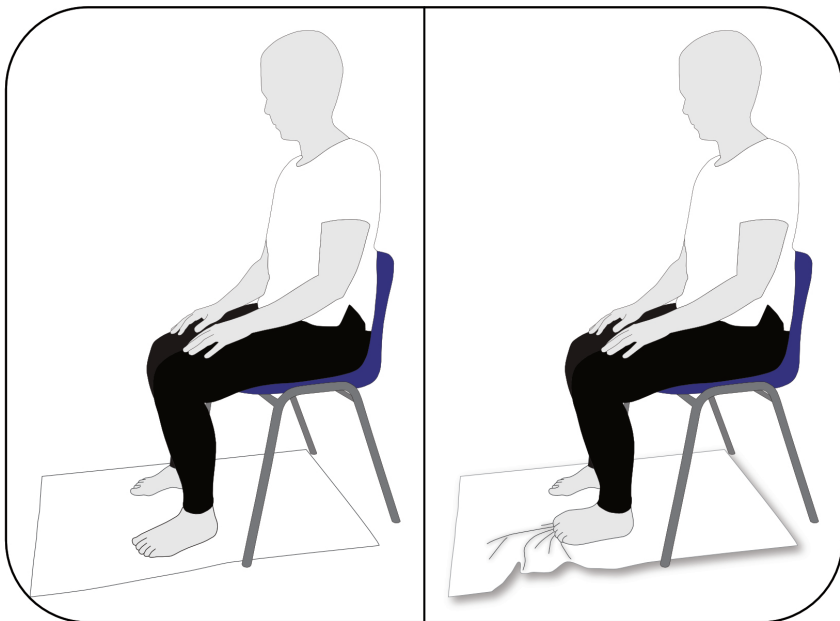
## 6. Intrinsic towel strengthening

This exercise is designed to strengthen the small muscles in your foot.

Start by placing a small towel flat on the ground. This exercise is performed in a seated position making sure your back is straight and legs bent comfortably at 90 degrees.

Place your painful foot on top of the towel and using your toes start scrunching the towel so that it is being pulled towards you. Do this in a slow controlled manner, making sure your heel remains in contact with the ground throughout this exercise.

When you have pulled the towel in as far as possible, flatten it back out and repeat the process between three and five times.



## Strapping

Strapping/Taping can be used to help support you toe to help guide improved position and stability. This can be a useful short term treatment that can help reduce your symptoms.

The aim of this low dye taping is to help stabilize and heal the plantar plate ligament after a sprain or injury.

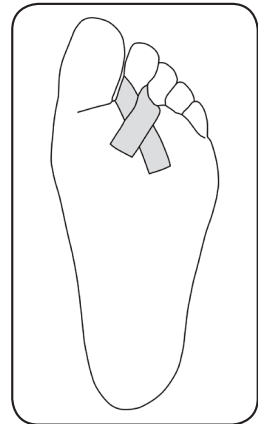
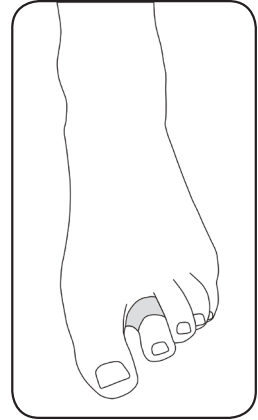
The tape used for this is a rigid strapping called zinc oxide tape. It's available in most pharmacies and can also be bought online.

Taping is only a short term treatment and we recommend it's used until your pain levels decrease.

We advise that each application of the tape is kept in place for a maximum or 3 to 4 days. You may find that the tape needs to be replaced more frequently in order for it to remain effective.

Before you start it can sometimes be helpful to have your strips of tape pre-cut.

To get the correct length of tape you can use your hand as a reference. Starting at the tip of your longest finger run the tape to the base of your palm. This should give you the correct amount or tape. Next cut the tape lengthwise into 2 equal sized pieces. Take one of the pieces and stick it back on the roll for later



## HOW TO APPLY THE TAPE

You might need to get someone to help you with this. Take your piece of tape and centre it on the top of your

toe. Once in place secure it to the base of your toe. Wrap one side in between your toe, Making sure it doesn't crease, pull down slightly on the tape to create some tension and secure it across the ball of your foot. Make sure the tape doesn't crease as you take it in between your toes.

With the other side of tape do the same as before only this time you will be going in the opposite direction with both pieces crossing over one another and secured onto the sole of your foot.

To decrease the stress on the plantar plate and to help it heal, the tape should be pulling down with just enough tension as to hold the toe in a slightly lower position than the other lesser toes.

Initially the tape might feel slightly tight but this should ease off. The tape should be removed immediately if you experience any increased discomfort, irritation, itching or pins and needles.

### What else can be done?

The good news is that your pain should start to improve by following the above advice that is aimed at reducing the pressures from around the deformity. These measures will not correct or reduce the size or shape of the deformity.

If you have any concerns that you are getting worse or notice any changes in the shape of your foot please contact your local MSK Podiatrist or email **PodiatryMSK@lanarkshire.scot.nhs.uk**.

## FREQUENTLY ASKED QUESTIONS

The information below will answer many of the questions you may have in the early part of your treatment. We aim to ensure your specific needs are considered throughout.

A shared decision making process is used by our teams. This means you will be informed about the treatment options open to you the risks and benefits of each option. You will be supported to make a choice about which treatment best meets your needs.

We hope the following questions that have been developed on the back of MSK focus groups, will provide you with some answers and information around your condition.

### What is wrong? Why? What is the cause?

Lesser toe deformities are changes in the shape of any of the four smaller toes of your foot. These changes can often cause pain in the toe itself or can be uncomfortable when wearing shoes due to friction and pressure of the toes against the shoe. These changes are commonly seen in the second toe but can affect any of the lesser toes, leading to clawing, curling or overlapping.

### What is the possible impact on my health and function?

Many people who have lesser toe deformities do not develop any pain or problems with their feet and require no treatment. However, some people will develop pain and can have difficulty finding comfortable footwear. Tight fitting shoes can rub on the deformities which can result in your skin becoming red and swollen and in some cases the skin can thicken or blister. Sometimes a fluid filled sac called a bursa can develop over the joints which can become inflamed and painful.



## Will I get better or worse?

The good news is that your pain should start to improve by following the above advice that is aimed at reducing the pressures from around the deformity. These measures will not correct or reduce the size or shape of the deformity.

If you have any concerns that you are getting worse or notice any changes in the shape of your foot please contact your local MSK Podiatrist or email **PodiatryMSK@lanarkshire.scot.nhs.uk**.

## Is it curable?

Unfortunately there is no quick or easy fix. Your pain should decrease by following non-surgical advice that is aimed at reducing or removing the pressures that aggravate your symptoms. These conservative measures will not correct or reduce the size or shape of the deformity. It is important to note that if you have any of the contributing factors you will need to consider making the necessary changes to your lifestyle to help aid your recovery.

The one person who can help you get better is you!

## How long will it take to get better?

Your symptoms should start to improve within 3 months of following this advice.

## What are you (the health professional) able to do about my problem?

By using our self-help tool, we would like to help you to better understand your condition and provide you with the tools which should help support your recovery.

### **What is the treatment that is most appropriate for me?**

Treatment protocols for Hallux Valgus always start with basic principles and we would encourage you to consider trying some self-help treatment in the first instance before making a referral to your local Podiatry department.

### **What can I do to help myself to alleviate it?**

We would encourage you to consider trying some selfhelp treatment in the first instance before making a referral to your local Podiatry department.

### **Why am I not improving? Where have I gone wrong?**

#### **Am I doing the right things?**

Treatment protocols for Hallux Valgus always start with basic principles and we would encourage you to consider trying some self-help treatment in the first instance before making a referral to your local Podiatry department.

## What can I do to help myself to alleviate it?

There could be a number of reasons why your symptoms may not be improving. If you have followed the self-help advice for three months and your pain has not started to improve please contact your local MSK Podiatrist or email **PodiatryMSK@lanarkshire.scot.nhs.uk**.

## How can I maintain my function and do the things I want to

### and need to do?

If you are in pain do not try and do all your normal daily activities such as housework, at once. Break the harder jobs down into smaller jobs and do something gentler in between. Extensive walking or standing should be avoided if it aggravates your pain. It is recommended to modify activities rather than to fully stop all forms of movement or exercise. Work out what you can do relatively pain free and use that as a starting point. Then over time build up your activity. Track and write down your progress to keep you motivated.

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