



PODIATRY

# FootScope

A foot health message from  
Bayswater Allied Health

## FEET AND THE BRAIN



The brain controls every part of the human body and, while it will come as no surprise that signals generated in the brain tell our feet how to move, what can the feet communicate to us about the brain? Problems with the feet can be a sign of diminished brain health. The main foot conditions that could indicate that the brain is not getting the oxygen it needs include constantly cold feet, fungal infections of the feet and nails, such as Athlete's foot, and foot cramps. All of these conditions can be an indicator of poor circulation.

The main piece of information our feet can give us about the brain is whether or not it is getting enough oxygen. If blood flow to the feet is restricted there's a chance that blood flow to the brain could be suffering a similar problem, and the brain will be absorbing less oxygen than it needs to be healthy. The main effects of lowered oxygen levels to the brain include memory loss, confusion and sleepiness, and depression is often a side effect due to a lack of understanding as to why you are struggling with everyday tasks. Long-term oxygen deprivation can lead to more serious problems, including the onset of dementia.

Improving circulation to your feet can heal your foot conditions, and it can also be the key to keeping your brain healthy. Avoid sugars and foods that cause your blood sugar levels to spike. Instead, try to keep your blood sugar levels consistent throughout the day by eating a balanced diet. Exercise regularly and, if you are able, try to get your heart rate up by going for a jog or a brisk walk at least once a day. A burst of energy that gets your pulse up and your lungs pumping will help to increase your oxygen intake and make your blood flow faster around your body, giving it more of a chance to reach all the places where it's needed. Treatment for the feet can also mean treatment for the brain — without even having to think about it!

### FOOT CONDITIONS THAT MAY INDICATE POOR BRAIN HEALTH

When circulation is causing problems with your feet it can correlate that poor circulation may also be causing problems for your brain. There are a number of foot conditions that can be a sign of poor circulation, and we have listed the main ones below. If you are concerned about ongoing symptoms in relation to any of these conditions, seek treatment and advice from your podiatrist.

**1. Cold feet:** if you struggle to warm your toes and feet and find that they are always colder than the rest of your body, this is an indication that your circulation is restricted.

If the circulation to your feet and other extremities is inadequate, this can indicate that circulation to the brain is also not functioning as it should be. If the circulation to your feet and other extremities is inadequate this can indicate that circulation to the brain is also not functioning as it should be.

**2. Chronic fungal infections:** fungal conditions of the feet and toenails that do not respond to treatment can be an indication of poor circulation. When blood flow is restricted, the oxygen and nutrients required to keep your skin and nails healthy and able to fight off infection are unable to get through, allowing conditions such as Athlete's foot to thrive.

**3. White nail beds (poor capillary refill time):** in feet with good circulation, the nail bed should be pink. If the nail is pressed it will turn white, but blood flow should return immediately, quickly changing the white back to pink again. If the nail bed remains white it is an indication that blood is not circulating properly. If blood is having difficulty circulating to the feet it may also be having trouble circulating to the brain.

**4. Cramps:** diminished circulation can lead to foot cramps, which can be extremely painful. If you are suffering from cramps on an ongoing basis your circulation is most likely problematic for both your feet and your brain.

#### THE FOOT–BRAIN EXERCISE

Need convincing that your feet and your brain are intrinsically linked? Try this interesting exercise to see the connection for yourself.

1. Sit in a chair with your back straight, knees bent and your feet flat on the floor.
2. Lift your right foot off the ground and use your foot to draw imaginary circles in a clockwise direction.
3. Don't stop turning your foot! Lift your right hand in the air and draw the number '6' with your index finger.
4. Have you noticed a change in your foot? Without being able to control it, your foot will have reversed itself so that it is now making circles in an anticlockwise direction.

This reaction is caused by the inability of the left side of the brain — which controls the right side of the body — to be able to process and interpret two movements in opposite directions. If you try the exercise again and draw the number '6' with your left hand instead of your right, you'll notice that the movement of your foot is easier to control, because the left side of your brain is controlling only your right foot as the right side of your brain is now controlling your left hand.

Just as the brain interprets movement of your foot and sends signals back to move your foot in the opposite direction, problems with the health of your feet can be a sign that your brain is not as well as it could be.



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