

The wonderful world of fascia

What is fascia?

Fascia is a continuous tissue found within the body that holds everything together, ensuring that we act as one unit.

It doesn't have a 'start' and a 'finish', unlike other soft tissue (muscles, ligaments etc) it is endless. It is also unlike muscular tissue in the fact it doesn't necessarily run in straight lines, but in fact runs in lines of stress (the way we move....or don't!!) or what can be described as a haphazard way. This can have a major impact to how we feel and move as this wonderful tissue doesn't just encapsulate muscles and muscle fibres, but nerve fibres and the organs too!

As many of my clients are probably aware the best way I have used to describe this, is to give the visual representation of a piece of chicken! When you initially hold a piece of chicken there can be a thin white layer of tissue surrounding the chicken, **this is fascia!** Another great way to think of it, is to think of a spider's web. Although the tissue may not look as organised as a web, it shows the interconnected nature of fascia. If you've ever lightly strummed a spider's web, you may have realised that the spider may be at the top of the web and you move the opposite corner, but through the energy produced, the spider can feel this and this goes for wherever it may be. In a useful way this shows how fascia can affect the body. You may find that you have painful symptoms in your shoulder, but the actual cause of this may be in the opposite hip or foot!

What makes fascia so unique?

Two interesting characteristics that fascia possesses are piezoelectricity and thixotrophy. These two properties can not only have a massive effect on how fascia operates but impacts the whole body.

Piezoelectricity – when a crystal (a solid, whose atoms are arranged in an orderly way) is put under mechanical stress, there is an appearance of an electrical potential across its sides. What this means is that mechanical energy (pressure) can be converted into an electrical current. If the tissue is therefore put into a dysfunctional pattern (injury, trauma and repetitive movements such as sitting) then there is a potential for both a build up of energy into the dysfunctional site (restrictions in the tissue that feel sensitive) and/or the inability for the body to send nerve signals in a productive way, may be come affected.

Thixotrophy - when put under a heavy, static pressure or unnecessary force, the viscosity of the tissue will actually become thicker, repelling the force. However when a subtle force is applied the tissue actually melts, allowing the fascia to be manipulated. Ever had a really painful massage where you're jumping off the bed?! Well this principle shows that it may not be the best thing if your goal is to cause a positive effect on the tissue, rather than a destructive one.

A little bit more technical!

As well as its characteristics, fascia contains many receptors, chiefly Ruffini and Interstitial that are very responsive to manual therapy. It also contains fibroblasts that are responsible for producing collagen and elastin within the tissue. Although how much collagen-elastin ratio your tissue consists of can depend on genetics and many other variables, their production can also be stimulated on how much movement the body is put under. So put simply, if you move more, your tissue may have a better balance between being flexible and stable.

Fascia has an amazing impact on the way we move and feel. As I've mentioned above, it lays itself down in lines of stress. What this means is that it adapts to the way we move (this will include exercising, stretching and everyday living, such as spending a lengthy time in a certain position) or in some cases don't move! It can become thicker and denser in these areas, resulting sometimes in dysfunction to the area, as the body cannot move in the way it's meant to through the inability to contract tissues properly. The simple fact is – fascia will adapt to the circumstances you place on it!

Keeping your fascia healthy!

3 important factors to consider when encouraging your fascia to stay healthy and functional are:

Move well – we are all different; we all move differently; we are all designed differently; but we must take this into account when we want our fascia to respond in a positive way. If our fascia has been allowed to thicken and change in a dysfunctional pattern then we need to adapt our programme design and any manual work to accommodate this. What might work for one person isn't necessarily the best thing for another.

Eat and drink well – what you put into your body is the fuel and building blocks for your next 'generation' of tissue. If you're not eating clean, healthy foods, you can't expect your tissue to be healthy. Fascia responds well to being hydrated, so ensure you're getting enough of the good stuff (H₂O) into your detail drinking rituals.

Sleep well – are body does a lot of its recovery when we are sleeping. If you've made the positive steps with the two points above, then you need to ensure that you're getting adequate rest. Do you make sure you're in bed by a certain time? Well this is another point to consider as your body goes through a natural sleep-wake cycle to ensure all of your body's systems are adequately working correctly.

If this has got your mind thinking more about fascia and you want to learn more, then I'm more than happy to answer any questions you may have, as this article just begins to scratch the surface of this weird and wonderful topic!