Zeitschrift: Helvetia : magazine of the Swiss Society of New Zealand
Herausgeber: Swiss Society of New Zealand
Band: 80 (2014)
Heft: [4]

Artikel: Osteopathy - health viewed from a different angle
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DOI: https://doi.org/10.5169/seals-943953

Health Corner

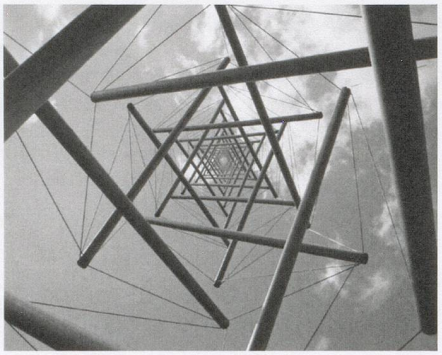
Osteopathy – health viewed from a different angle

We are living the life of quick fixes and instant gratification. Everything is at our fingertips and most importantly, everything is fast. Food is preferably fast, communication is even faster and the whole world can be tweeted with whatever is happening in real-time. Somehow our bodies have not yet caught up with the speed. A cold still takes a few days to go away, the flu puts us in bed for a week and a bruise still takes the same amount of time to fade as it did centuries ago. To bridge this gap, we have become increasingly adept at ignoring our body signals or covering these up with drugs, alcohol or medication that pretend to make us feel better. We seem to do this for physical as well as psychological issues. Unfortunately, this has removed our awareness of what is going on within. In our busy lives, we tend to push ourselves without listening to what our bodies are telling us. A quick trip to the pharmacy will fix whatever stands in the way of work or play.

Osteopathy is not new by any means. It began to evolve over a hundred years ago, when Doctor Andrew Taylor Still, a frontier doctor, sought a new way of practicing medicine that centered on our own body and its capability to heal itself. He studied the anatomy of the human body to a great degree and concluded that structure and function were utterly linked, that we as organisms were more than the sum of our parts and that in order for us to function without pain and restriction, all body parts needed to be free in their movement. We need to appreciate that everything alive is in motion – life itself manifests as motion. Only when things don't move well anymore, we experience pain and restriction and at the extreme end, when nothing moves at all – death.

The role of the Osteopath is therefore not to fix things in isolation, but to facilitate movement and this does not have to be restricted to the muscles and joints, but can involve the free flow of blood in blood vessels, the unrestricted expansion of the lungs or the unrestrained motion of the digestive organs. How, you might ask, do Osteopaths achieve that?

To give a sense of what Osteopaths do, the concept of "tensegrity" has to be introduced. For decades, we have looked at the human body the same way we would look at a building; with columns, beams and levers. These



biomechanical considerations are based on Newtonian Physics (the stuff that haunted you during high school). As it turns out, this is now being questioned, as too many things in the human body cannot be explained by this model. Our bones and joints would not be strong enough to withstand the forces movement and gravity produce. The concept of "tensegrity" originated in architecture (Richard Buckminster Fuller) and in 1948 Kenneth Snelson, a student of Fuller, built the first "tensegrity" structure (see picture). Other examples of "tensegrity" structures are bicycle wheels, geodesic domes and the newer rounded tents.

The word itself is a mashing together of "tensional integrity" which in simple terms means beams linked together with tension cables in a way that balances the tension and compression in the structure. That is the background, but much more importantly, tensegrity structures behave very differently from structures based on classical architecture. If you load a beam in a classical building, the forces will be distributed locally – hence all parts of a classical building need to be able to carry big forces and the foundations need to be very strong and stable. In contrast, loading the beam of a tensegrity structure distributes the force evenly through the whole system and the beam acts only in concert with the whole building. The consequences of this are huge and incredibly applicable to the human body (or all living things for that matter), namely:

- If you tighten one point in the tensegrity system, all other parts will tighten too
- Although tensegrity structures appear frail, they are in fact very strong
- Changing one bit of the tensegrity structure will have effects everywhere else in the structure
- The tensegrity structure is "self-stabilizing" - if it deforms, it can recoil to its original shape
- The tensegrity structure does not need gravity to hold it together
- Movement or deformation permeates through the whole structure simultaneously

The world's largest tensegrity bridge is in Brisbane (see picture). Note how light

the structure looks in comparison to the "normal" bridge in the background.
As Osteopaths, we look at the whole system and manually adjust tension which then affects the whole body. What is even more exciting is that newer research shows that even cells behave as tensegrity structures. Without going into any molecular detail, the cytologists Ingber, Wang and their team have demonstrated that by mechanically affecting the cell membrane, it is possible to affect the genetic behaviour of a cell. This model offers some explanation for how changes applied in one area will have effects a long way away from this area and maybe more significantly how changes to the gross structure will have an effect on the most fundamental levels of organization down to the molecular. This would certainly validate what osteopaths all over the world have been saying all along. Watch this space!

By Pia Wittwer

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