

### **Bodymechanics, how we roll!**

#### ***How do we Explain how the Body Works and what we are Looking at in the Bodymechanics Clinic?***

There are many ways to look at the body as there are many ways to look at the management of any moving, developing or fluid environment. Many of these approaches work but some are always better than others. Everybody tries to manage their bodies in the best way that they can.

Some people go to the gym to improve the function of their heart and lungs, to lose weight or increase their muscle strength and balance. Others aim for the same effects by competing regularly in team and individual sports, dancing or walking the dog. If we work hard at these activities, our bodies ultimately adapt, muscles grow, cardiovascular function improves, resulting in our performance becoming better, faster and stronger and movement patterns (or muscle memory) being created (for more information see our information sheet on how we move).



Whilst our bodies can adapt positively as a result of the challenging activities that we decide to do, negative postural / musculoskeletal adaptations can occur from our jobs that we do on a daily basis, or repetitive movements that we do in the course of our day / week / lifetime! Take for example, sitting at your desk for 10 years writing and using a mouse. Your body is going to develop changes in posture, strength and coordination of the side being used, creating muscle memories of the movements that you do repeatedly. This can make one side of your body very different to the other. If done repeatedly and over a long period of time can also have major effects on the way in which we walk, bend, run and complete any other exercise.

Consider also, that while many of us opt to play sports to develop our fitness / strength / coordination, similar negative adaptations can occur when playing sport repetitively, especially when we start these sports at very young ages and these movement patterns become part of our bodies motion patterns (muscle memory). Who can remember in our days gone by playing tennis one sided, dancing, playing netball or basket ball or taking off from the long jump pit with one leg leading? Each activity will have preferentially strengthened one area of the body over another, repeated enough times to lodge the movements in the muscle memory.

These non symmetrical movement patterns can be further developed by injury or illness (see our article on the ankle sprain and how it relates to the rest of the body). Imagine how abdominal surgery can affect the muscular activity and therefore the support that we provide to multiple joints of the spine, chest and pelvis. Consider another big abdominal impact for 50% of the population: Changes with carrying and nurturing a child in the womb for 9 months and then the subsequent and often traumatic effects of child birth (see our pre and post natal advice sheet). Multiple factors can affect the muscles: stretching, tearing, pain inhibition from working, over activity of other muscle groups helping to provide support to the body.

All of these activities cause musculoskeletal changes, often non-symmetrical adaptations and patterns of motion that can stay with us the whole of our lives. At Bodymechanics clinics, we will assess how your body is working and what adaptations have taken place over time. We know that all of these experiences, whether fun, painful, life changing or just day to day boring living can produce adaptations/ changes in the body, creating a very individual and unique way of moving. Some of the adaptations we will highlight are positive and others, especially those that are not symmetrical within the body will increase the stresses on various areas of the body will be negative.

Bodymechanics clinicians know how to analyse movement and body motion. We know how the body should move and the effects that occur when it doesn't move properly and can explain the repercussions of these non symmetrical movements. We also understand how these compensations can cause other areas to have increased mechanical stresses, eventually leading to a musculoskeletal failure in the body.

Let us return to the question of how we look at and assess the body. Should we isolate one joint (e.g. the knee or the hip) and examine it as a sole entity of the

system (like practitioners are taught within the medical model?). We could fix its local issues and therefore alleviate some symptoms..... for a while. Or do we can look at it from top to bottom combined with the story of your issues and experiences and analyse all of the facts and be able to identify which adaptation change is causing your problem and the motion / restriction that is inhibiting your ability to complete the activity that you would like to complete. The other localised analysis and treatment is not wrong, it may help but it is not going to offload the painful structure for ever.

We often use analogies to explain the complexity of what we are looking at in Biomechanics clinics. 2 simple analogies of what we do are summarised:

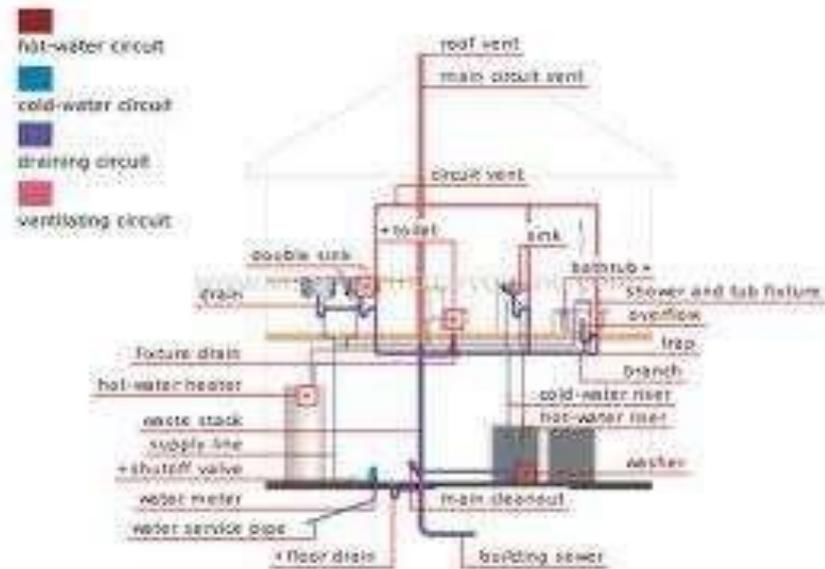
How many of us have changed a tyre on our car or been in for the MOT and the tyre looks fine on the outside edge but when you look at the inside edge it is completely bald! or vice versa. The tyre is changed, the tracking may even be



adjusted, but is the true root of the problem addressed? In some cases, yes, in the majority, no!! What if there is a steering problem? What if there is a problem in another area of the car leading to non symmetrical stresses going through the tyres?

Now consider, could this be happening to the inside of outside of your knee joint, hip, shoulder or lower back? Does your pressure of motion always load equally? The answer is no, can we change this? Yes we can. So how far away from the painful joint could issues be coming from? Well it could be as far away as from your big toe to your neck.

Another analogy that could help you with this issue of distance from cause is to think of the body system like a central heating system. Imagine your boiler repeatedly breaks down and it is repeatedly identified that the pump which circulates water around your pipes in your house keeps burning out. Multiple engineers have come in and fixed the problem locally by fitting a new pump. This fixes the issues (symptoms) and all is happy but for how long? Until the pump fails again and needs to be changed! It is not until a different engineer arrives assesses your whole heating system and identifies the narrowing of the pipework in your roof, a long way from the pump and explains that this over-pressurises the system and therefore overstrains the pump, that you have a satisfactory outcome to your problem. The root of the problem is fixed, rather than the area that is visibly failing.



You could ask 'why had no one done this before?' This is a question that we regularly hear in Bodymechanics clinics. The answer is that the body does not operate segmentally and when it is viewed as separate parts, rather than as the sum of its parts, a long term solution to your problems will not be diagnosed correctly and treated correctly. The medical model in which we are taught breaks down the body in to its component joints in order to make learning easier. This knowledge is then rarely amalgamated to give a truly holistic overview of what is happening.

Unfortunately in our lifetimes we only get one body to allow us to do all the things that we want to achieve. Could we manage that body better? For example, do we replace multiple pumps (use anti inflammatory, pain killers or undergo arthroscopies) before looking at the whole system and find the root cause of the problem? We are keen to help anyone who is suffering from pain of problems that are preventing them from doing the things that they wish to achieve. Contact us now to find out how we can help you.

Thank you for reading, we look forward to hearing from you.

The Biomechanics Team.

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