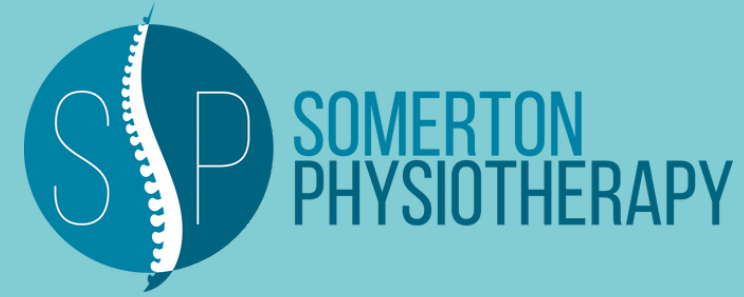


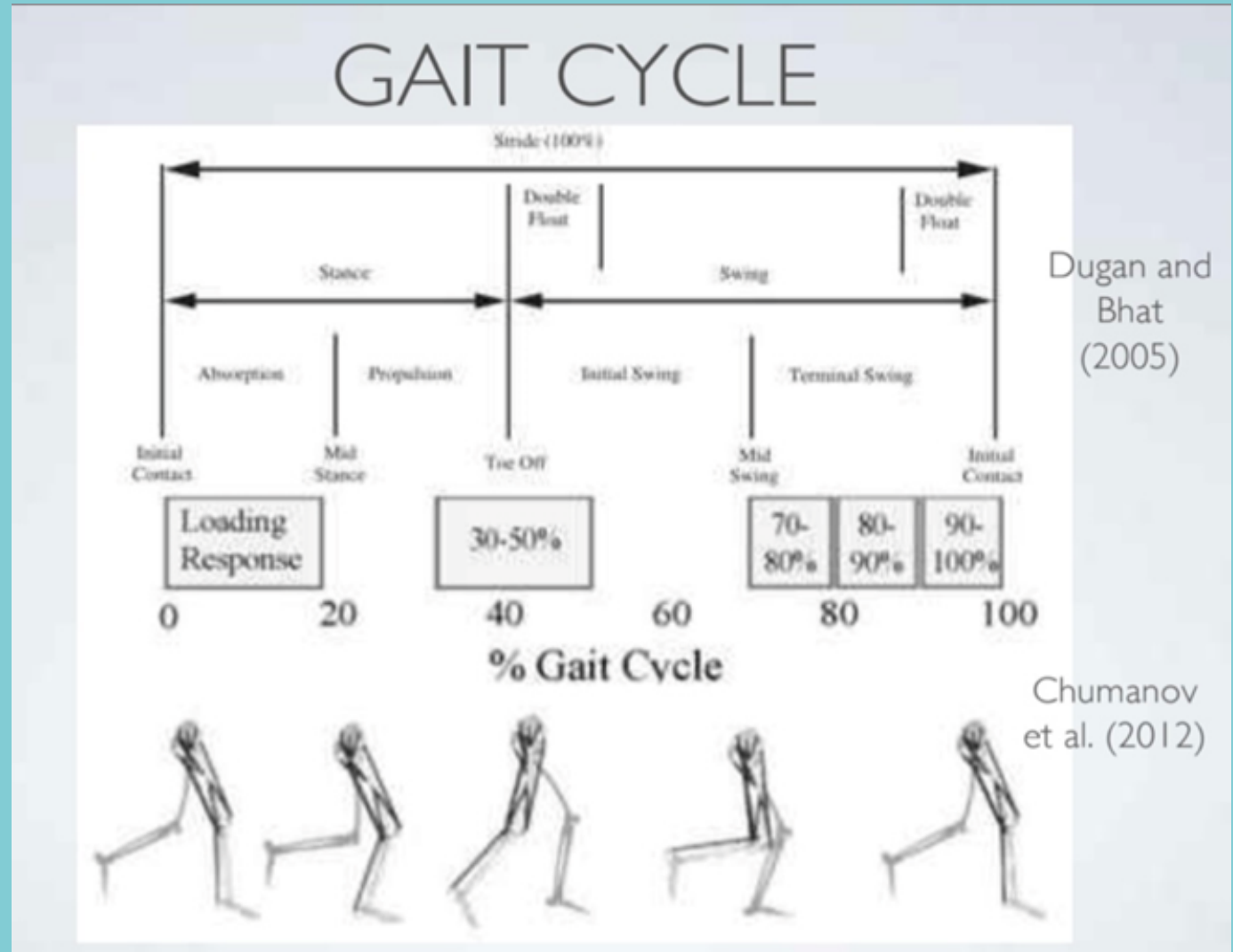
Gait Cycle



The Gait cycle describes how humans walk and run, in other words, how we move. A complete gait cycle begins when one foot makes contact with the ground, and ends when that same foot makes contact with the ground again. One cycle is made up of two distinct phases

•Stance Phase: The part of the gait where there is contact with the ground

•Swing phase: The part of the gait where that same foot is not in contact with the ground.



Stance phase:

This is widely considered to be the most important phase of the cycle as this is where contact is made and load is applied through the legs in order to absorb external forces (ground reaction force) and Internal forces (muscle contraction). This phases can be subdivided into three distinct stages.

1) Initial contact

Initial contact is when your foot lands on the ground. Despite current beliefs that it is bad for you, 89% of runners have been shown to be heel strike runners. This is where the knee bends and the foot flattens to absorb the shock of impact.

2) Mid stance

At the start of mid stance, the leg in contact with the ground is continuing to absorb load and then transition to a more stable position ready for the next stage. In this stage the opposite leg is in the air so all the bodyweight is carried by a single leg. Single leg stability is very important here to prevent injury.

3) Propulsion

This is the final stance phase where the foot is still in contact with the ground. The heel lifts off the ground as we prepare to push the ground away with the hip, knee and ankle in order to propel us forward. A complex system of tension and joint movements are at play to deliver this power push.





Swing Phase:

The Swing phase of the gait cycle begins when the toe comes off the ground and ends when the foot makes contact with the ground again completing one gait cycle. This phase is important as it sets the right mechanics in motion for foot contact during the initial stance phase allowing for a smooth transition and good load absorption.

If you are concerned about your running technique, or are suffering from running related pain we have a number of interesting Running/Gait Analysis packages performed in our running performance lab. Head over to our Running Performance Lab for more information.

Our aim at Somerton Physiotherapy is to help our clients improve their performance and achieve their rehabilitation goals. Our Running Performance Lab service provides a platform for recovering athletes to regain their full potential. It also affords healthy athletes the opportunity to improve running performance variables which can contribute to the prevention of future injury.

We treat runners of all backgrounds, whether you are a beginner, recreational runner or an elite athlete. If you are suffering from running related pain or just want to improve your running times, our detailed assessment and treatment plans and packages will help you to take your training to the next level.



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