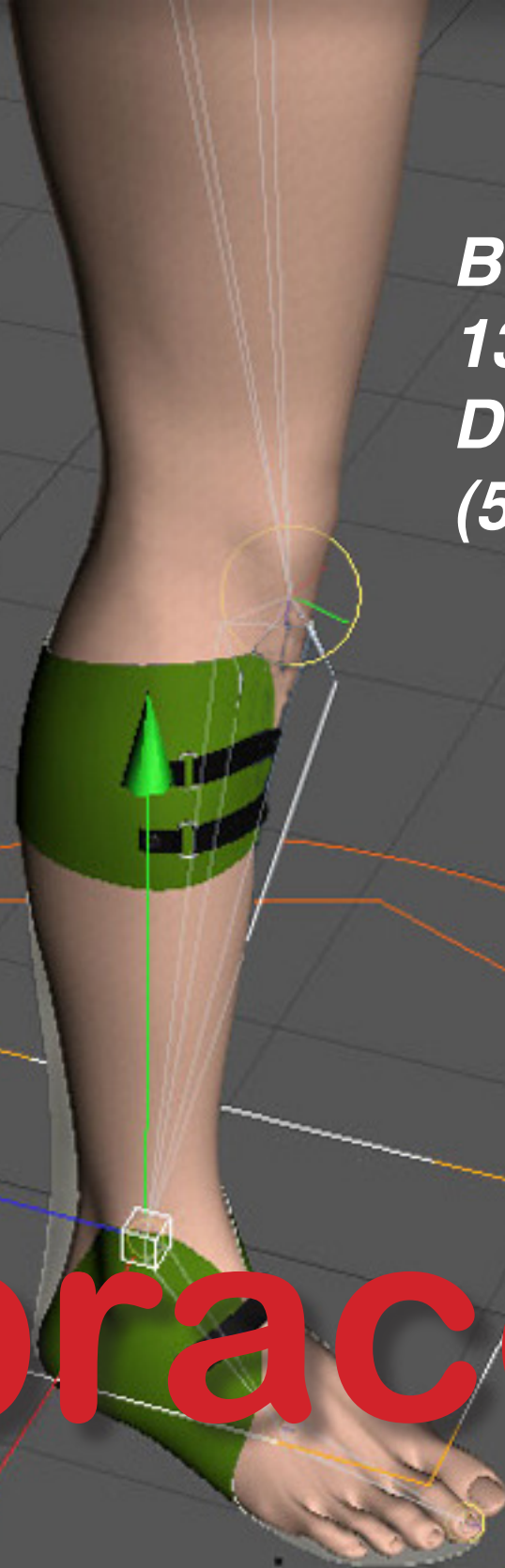


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Energy Storage



Prosthetics has been utilizing this technology over the past 20 years and it has revolutionized the industry.



Mass Production



Orthotics has been slow to adopt the technology due to the need for a customization.

A custom shaping is required to produce a low profile orthosis.

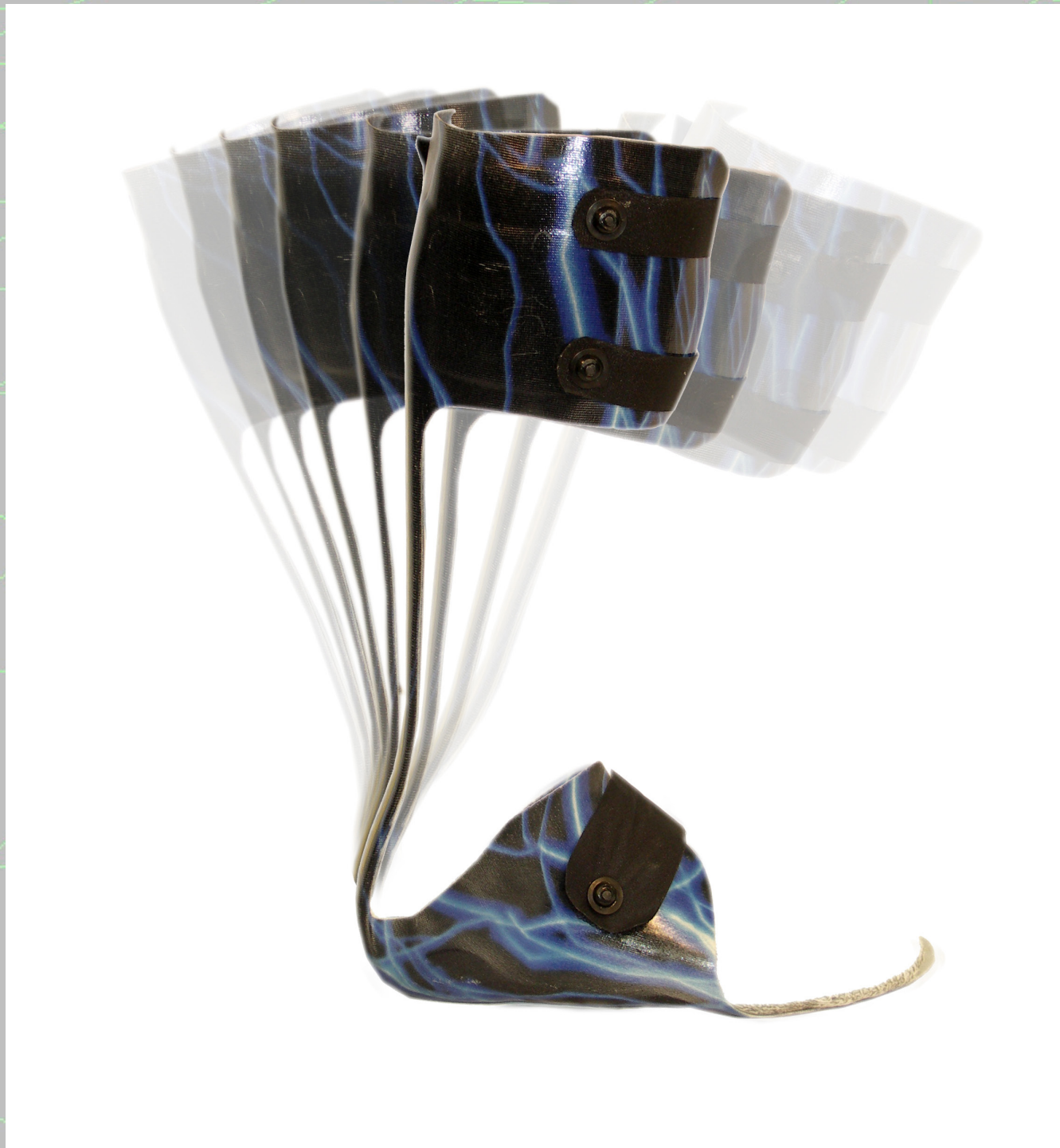


Each orthosis requires “One-Off Engineering” to produce the specific resistance strength for each patient level of pathological deficit

The “Dynamic Response” Orthotic System

The only custom energy storing
AFO





Dynamic Response

It produces much more than just
energy return

Proprioceptive Balance



This system replaces the calf muscle group function while allowing the patient to maintain proprioceptive balance

Patient Testimonial

The CMT Drummer
has new Ankle Foot
Orthotics.

Click video to play

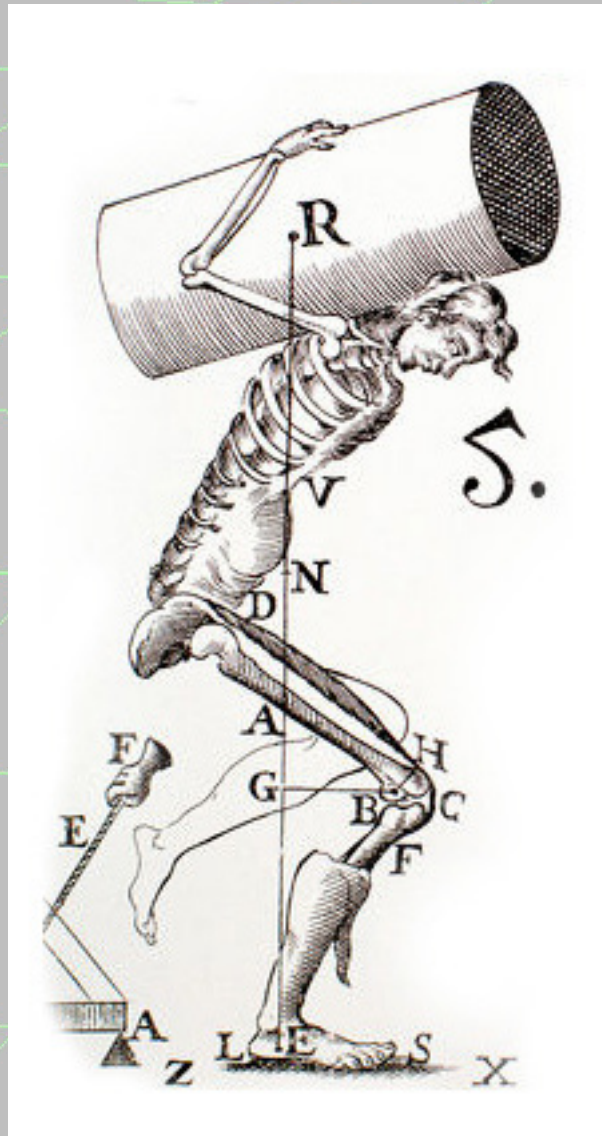
Evaluating Plantar Flexion Strength

Gastrocnemius and Soleus against full weight bearing

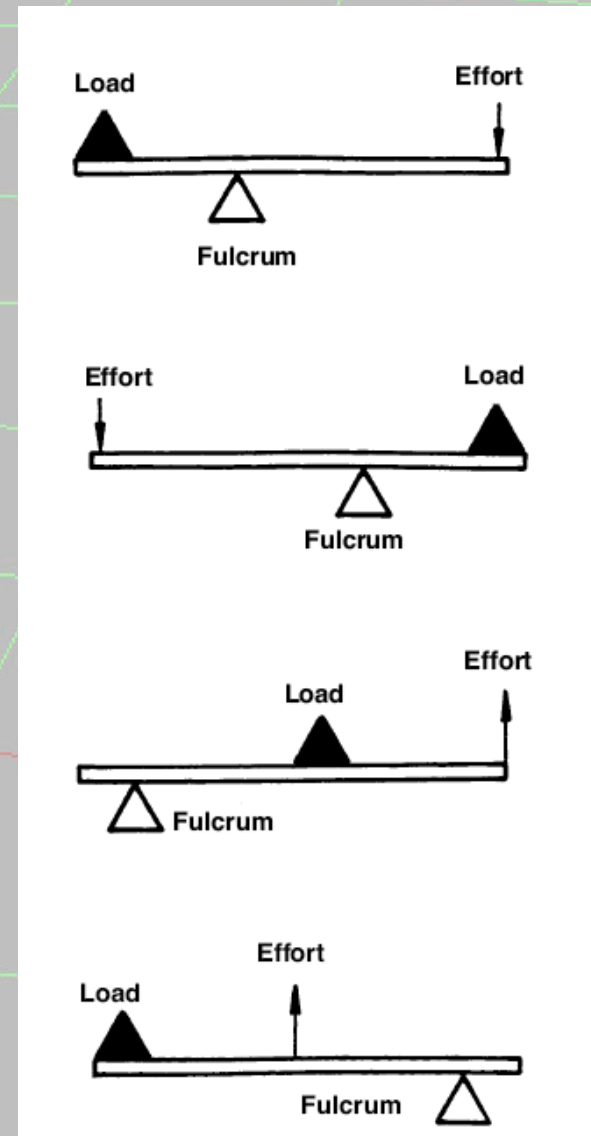


Replacement of absent strength or supplement of weakness
requires grading

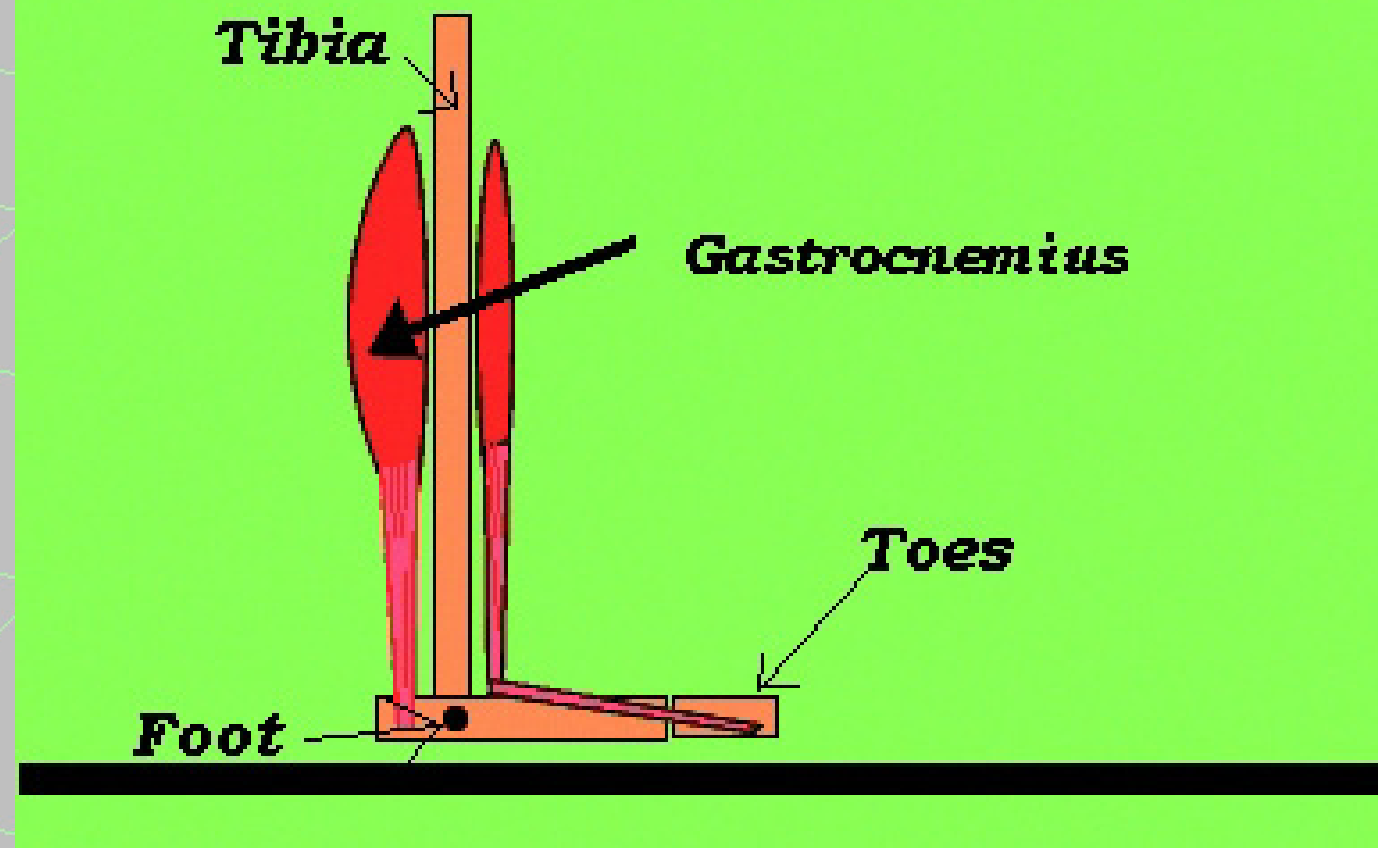
Ankle Lever Systems



Picture from De Motu Animalium (1680), by Giovanni Borelli.

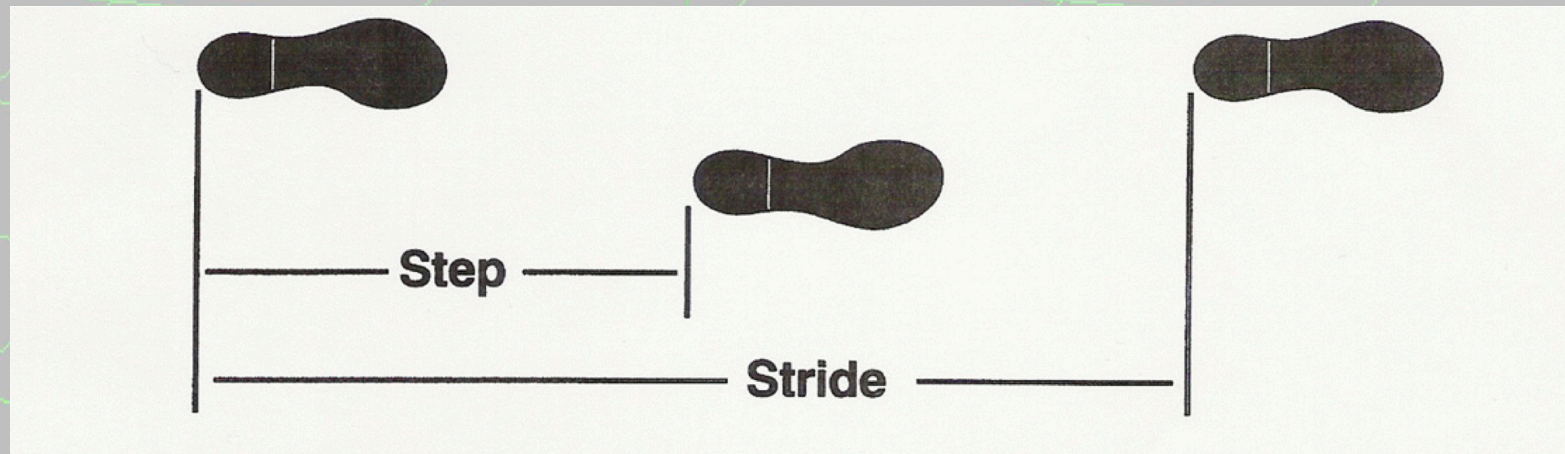


The foot



The lever system of the ankle enables propulsion and standing balance

Improving Patient Function

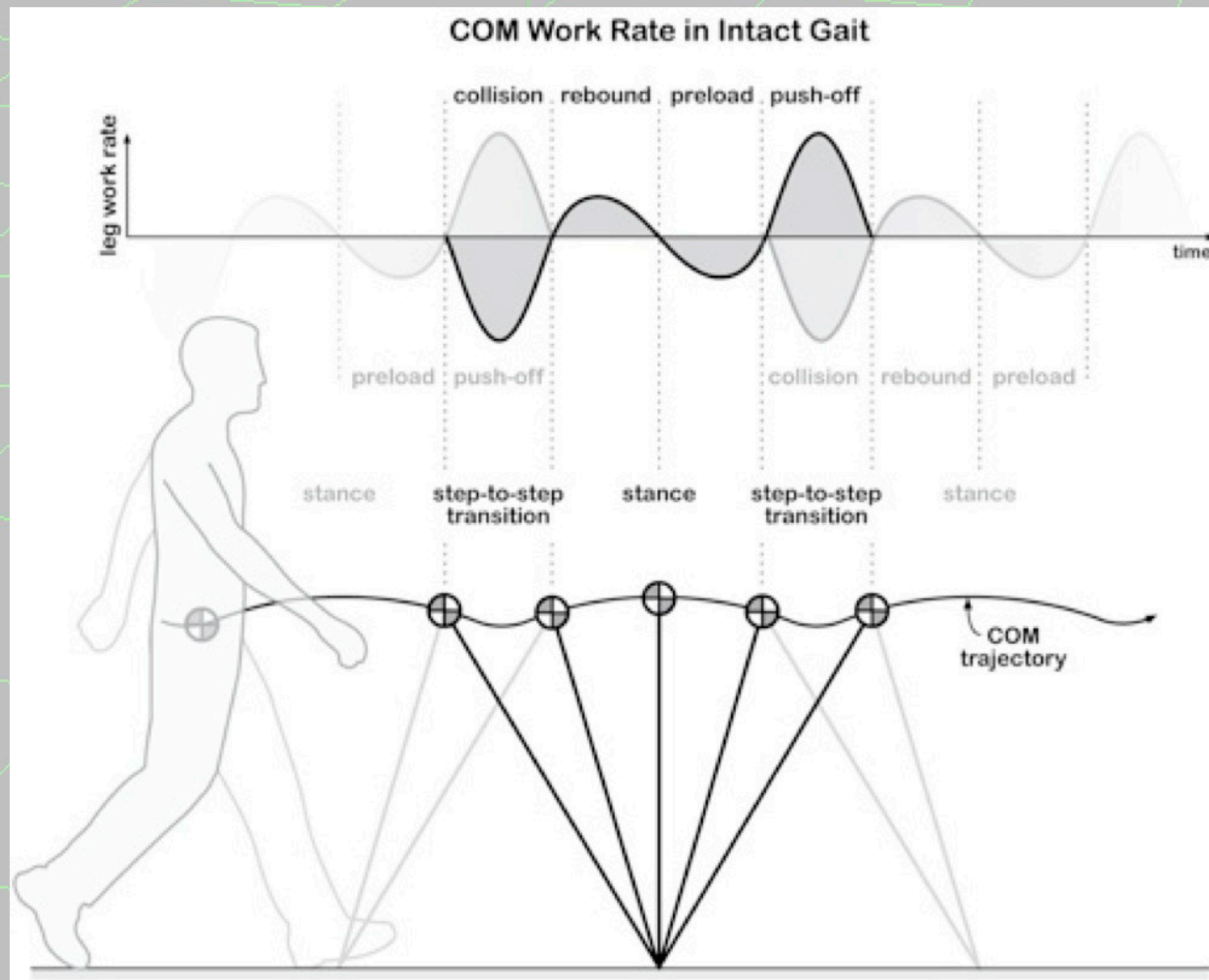


Increasing Stance-Phase stability allows the patient to spend more time on the extremity



The foot needs to be maintained in the line of progression of the knee for the lever system of the ankle to be effective

Center of Mass



When the patient feels stable on both extremities their gait becomes fluid and their energy expenditure reduces

Energy Storing & Proprioceptive Balance



A stable acceptance of weight to each extremity increases the time on each extremity and returns the patient to a fluid gait

A 3D digital model of a human leg and foot, positioned on a grey grid floor. The leg is wearing a green brace with two black horizontal straps. A yellow circle is drawn around the knee joint, with several thin white lines radiating from it. A green line with a cone at the end points upwards from the knee. A blue line with a cone at the end points downwards from the knee towards the ankle. A red line with a cone at the end points downwards from the ankle towards the foot. A yellow rectangle is drawn around the foot. A large orange circle is drawn on the floor around the foot. The text "Bio-Mechanical Composites Inc" is in the top right corner, followed by "1300 Keo. Way", "Des Moines, Iowa 50309", and "(515) 554-6132". The website "phatbraces.com" is written in large red letters across the bottom of the image.

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