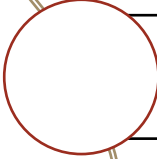
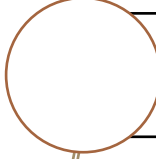
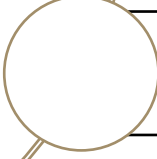


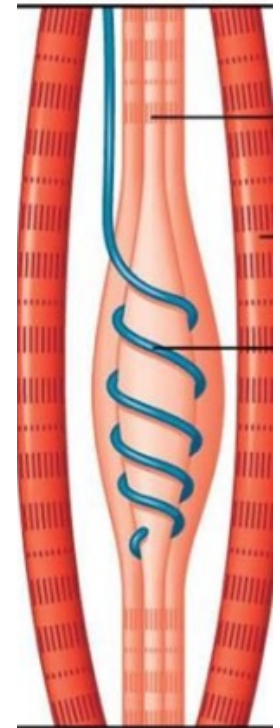
STRETCHING

-  The stretch reflex
-  Reciprocal and Autogenic inhibition
-  Golgi Tendon Organs (GTO)



MUSCLE SPINDLES

- 1. detect length in the muscle
- 2. detect the speed of the lengthening
- 3 tells the muscle to **CONTRACT** to counteract the stretch
- This is the Stretch Reflex



RECIPROCAL INHIBITION

Reciprocal = opposite

Inhibition = prevent

When one muscle contracts (the agonist) – the antagonist must relax

It's a physiological rule



AUTOGENIC INHIBITION

AUTOgenic = same

Inhibition = prevent

Tension detected by the GTO

Signals that **same** muscle to “switch off”

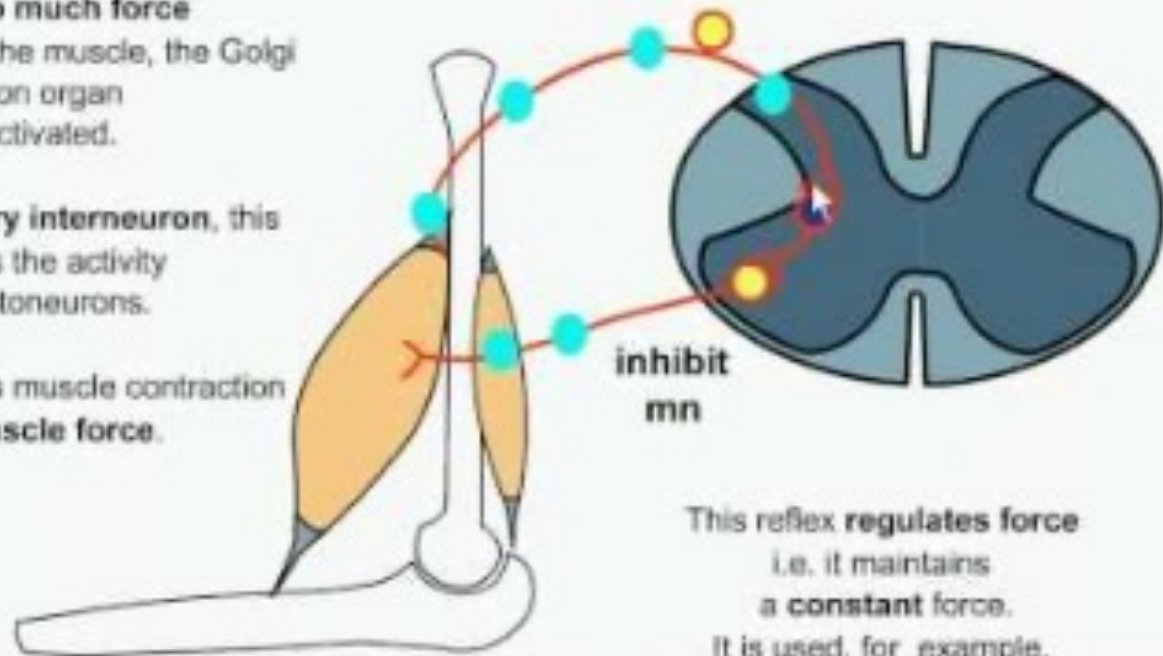


The reflex mediated by the Golgi tendon organ.

When **too much force** is generated by the muscle, the Golgi tendon organ is activated.

Via an **inhibitory interneuron**, this reduces the activity of motoneurons.

This **decreases** muscle contraction and muscle force.



This reflex **regulates force** i.e. it maintains a **constant force**.
It is used, for example, when attempting to maintain a constant grip on a paper cup.

