

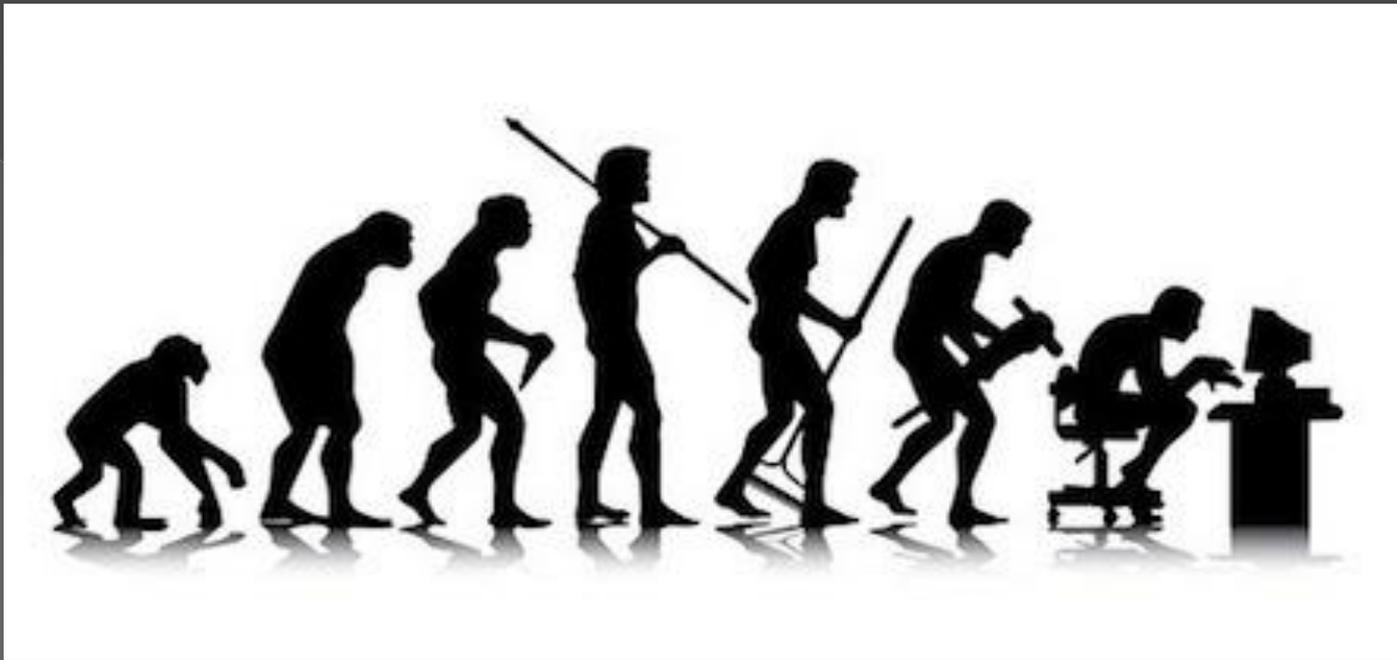
Thoracic & Lumbar:
Mobility, stability and
factors contributing to
dysfunction.

Outline

- In just over an hour we will take a look at why mobility and stability is so important and what it means for the lumbar and thoracic in regards to pain and dysfunction.

Outline

- ◉ A Joint by joint approach
- ◉ How lack of mobility leads to dysfunction
- ◉ Alternative assessment options
- ◉ Treatment techniques
- ◉ Corrective exercises and taping to assist rehab.



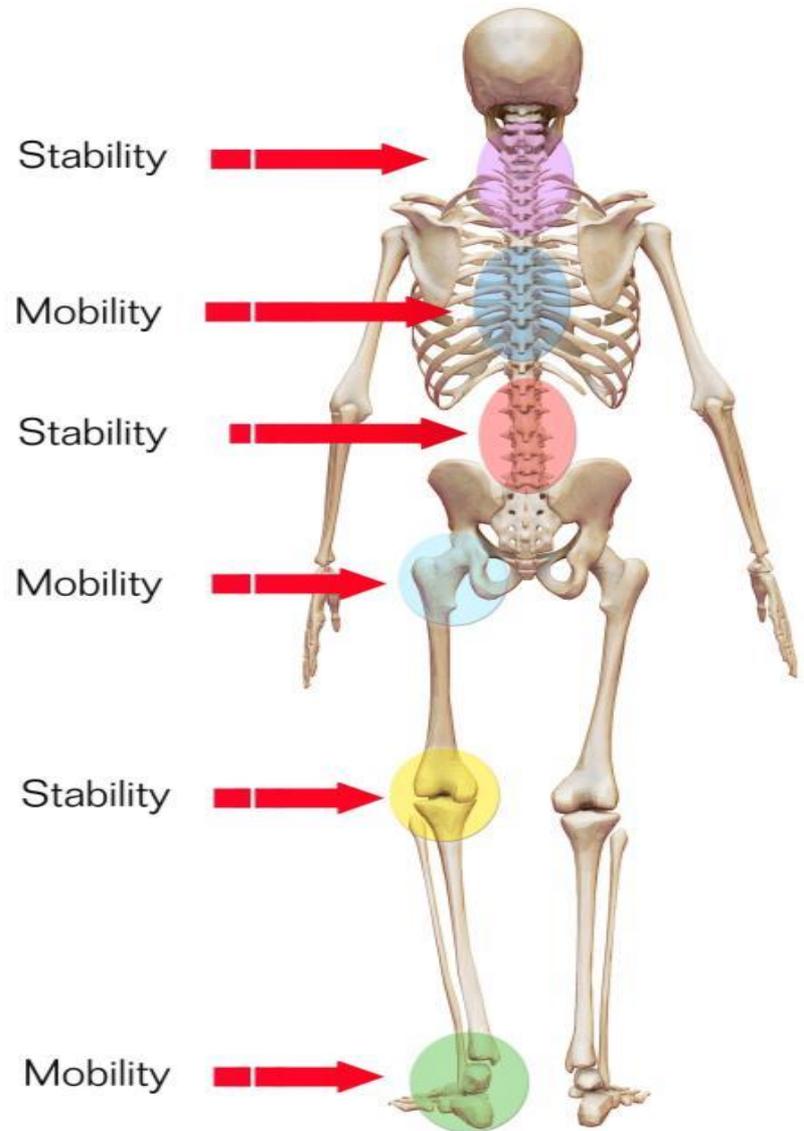
- ◉ Where are we going wrong?
- ◉ What does this have to do with the thoracic and lumbar?

Stats.

- ◉ 13.6% of Australians have back problems
- ◉ The majority of them sit in the 35 – 64 & 65 – 79 age brackets



A Joint by joint approach to mobility and stability



- If the mobility joints are performing at less than adequate, meaning they have lost the ability to move and function as designed, we compromise stability both at that joint and in the joints/areas designed for stability.

- ① Your brain will find a way around mobility restrictions, at a cost
- ① You will sacrifice stability to gain temporary mobility

The body gets really good at what we give it, be it movement or lack of!



Optimal stability can't happen without mobility!

How lack of mobility leads to dysfunction

- A joint that has reduced mobility will ask its neighbour to help produce the movement, at the cost of stability.
- That joint doesn't have the ability to do it on its own anymore so it needs to '**borrow**' movement.

- We require our bodies to perform the task at hand regardless of the restrictions and road blocks.
- “Get me there or do this with whatever it takes!”
- The body will find ways around these road blocks to still be able to perform the same task.

- ◎ The brain will keep finding ways around the problem and get the job done, until it can't.
- ◎ What presents to us in our clinics is:
 - > Insidious, idiopathic low back pain.
 - > I bent down to pick up a feather and my back 'went'

Regional Interdependence

- “The concept that seemingly unrelated impairments in a remote anatomical region may contribute to, or be associated with, the primary complain”

(Wainner, 2007)

Assessment for the Thoracic & Lumbar

- ◉ We have about 35 - 40 degrees of thoracic and lumbar rotation.
- ◉ Doesn't sound like a lot does it? That is why our shoulders mainly, and hips require so much mobility.
- ◉ The lumbar keeps the midline stable while we ask it to flex and move under load, the scapula keeps a stable base for the GHJ to move with massive amounts of range.

- Let's add trauma or lifestyle factors, WAY too much sitting, desk work, study, increased kyphosis and the resulting connective tissue changes on top of that little amount of thoracic movement we have and what do we get?

FUNCTIONAL LIMITATION



Treatment techniques to restore mobility

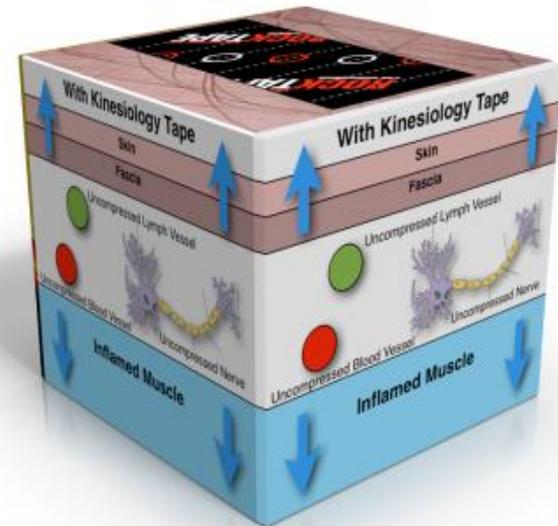
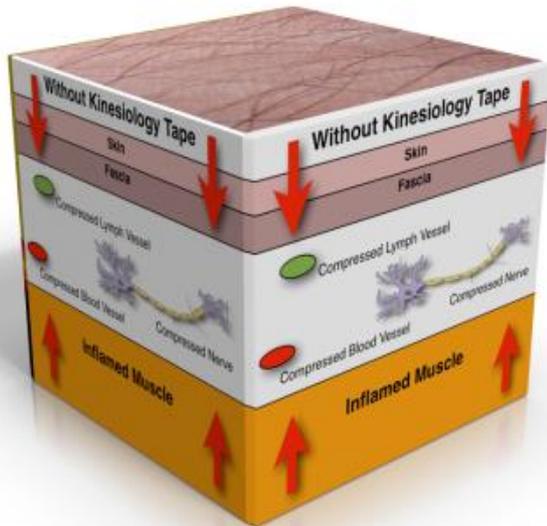
- ◉ Work from superficial to deep
- ◉ Erector Spinae group
- ◉ Intercostals
- ◉ Diaphragm
- ◉ Contract/relax stretch

Corrective exercises and taping to assist rehab

- Mobility: Roller or ball
- Postural taping with Rocktape

How Rocktape works

- Applying an elastic tape on the skin creates a lifting effect, decompressing the subcutaneous layers beneath the tape.



Proposed effects of decompression

- ◉ **Fluid effect** – allow better flow of lymphatics / superficial blood flow
- ◉ **Mechanical effect** – allow better glide between tissue layers
- ◉ **Neurological effect** - decrease nociceptive drive and provide alternate mechanoreceptor input. Improve proprioception.

Exact mechanisms remain unclear...

Rocktape application for posture

Aim to assist in establishing a targeted posture to facilitate normal movement patterns:

1. Place the body into the desired posture, even slightly over-corrected.
2. Apply the tape to facilitate the intended posture (via cutaneous stimulation).
3. Apply the tape with little to moderate stretch of up to 30%

The 'mankini'



- Our job is to try and educate people to the best of our ability to help them prevent the 10, 20, 30 years down the track with significant lack of mobility that is causing pain and considerable dysfunction.

QUESTIONS



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