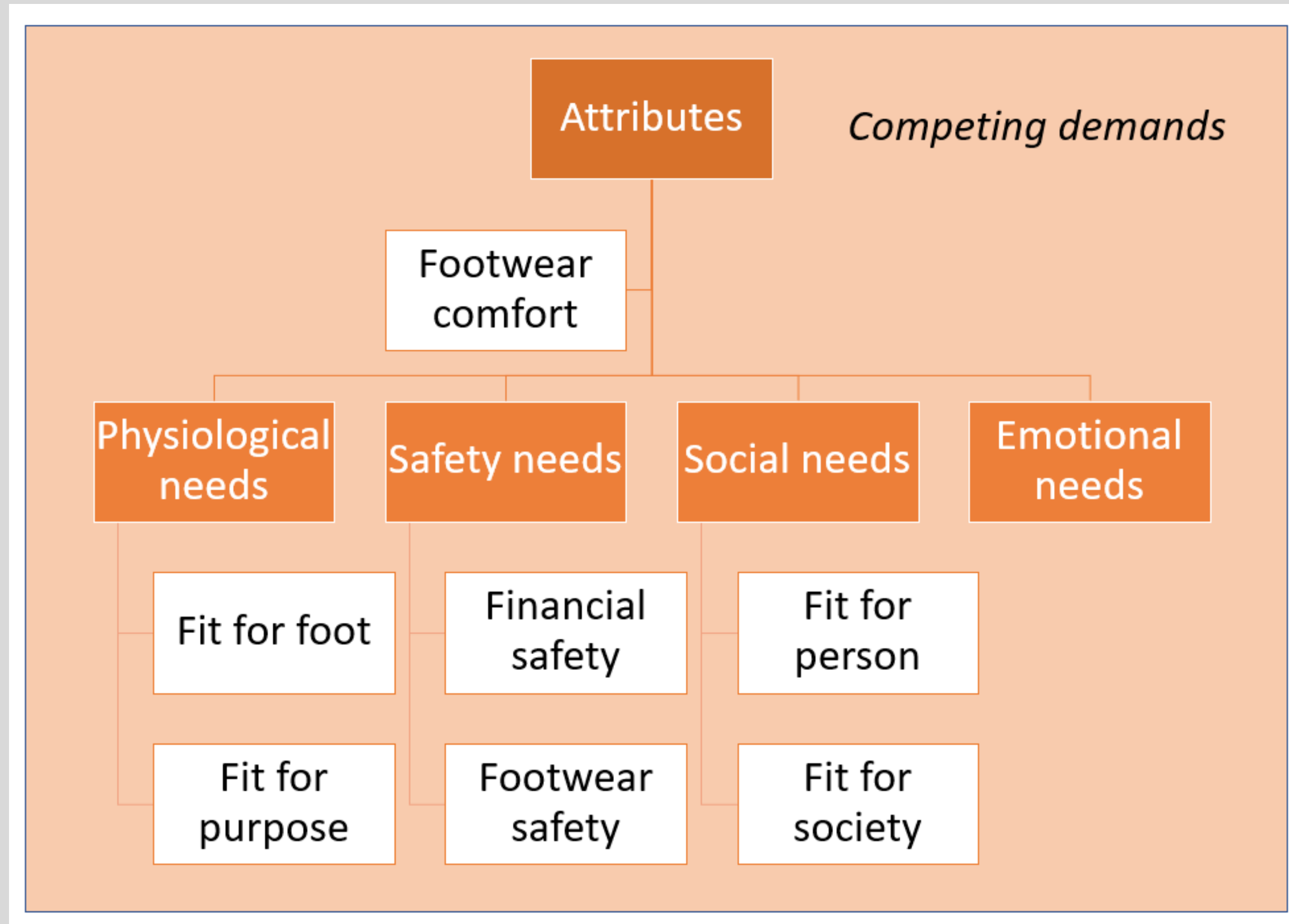


A conceptual framework of footwear needs - clinical applications



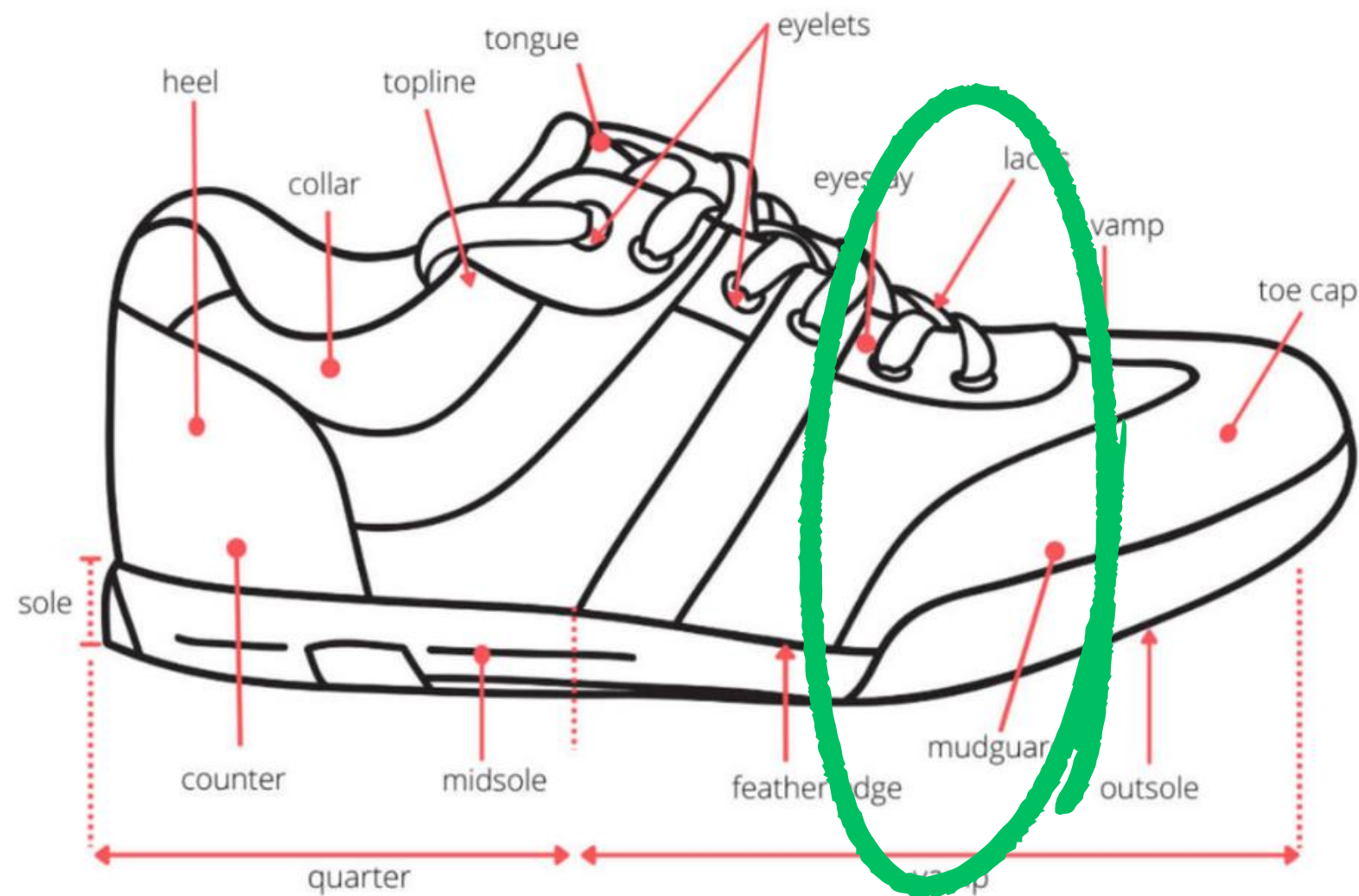
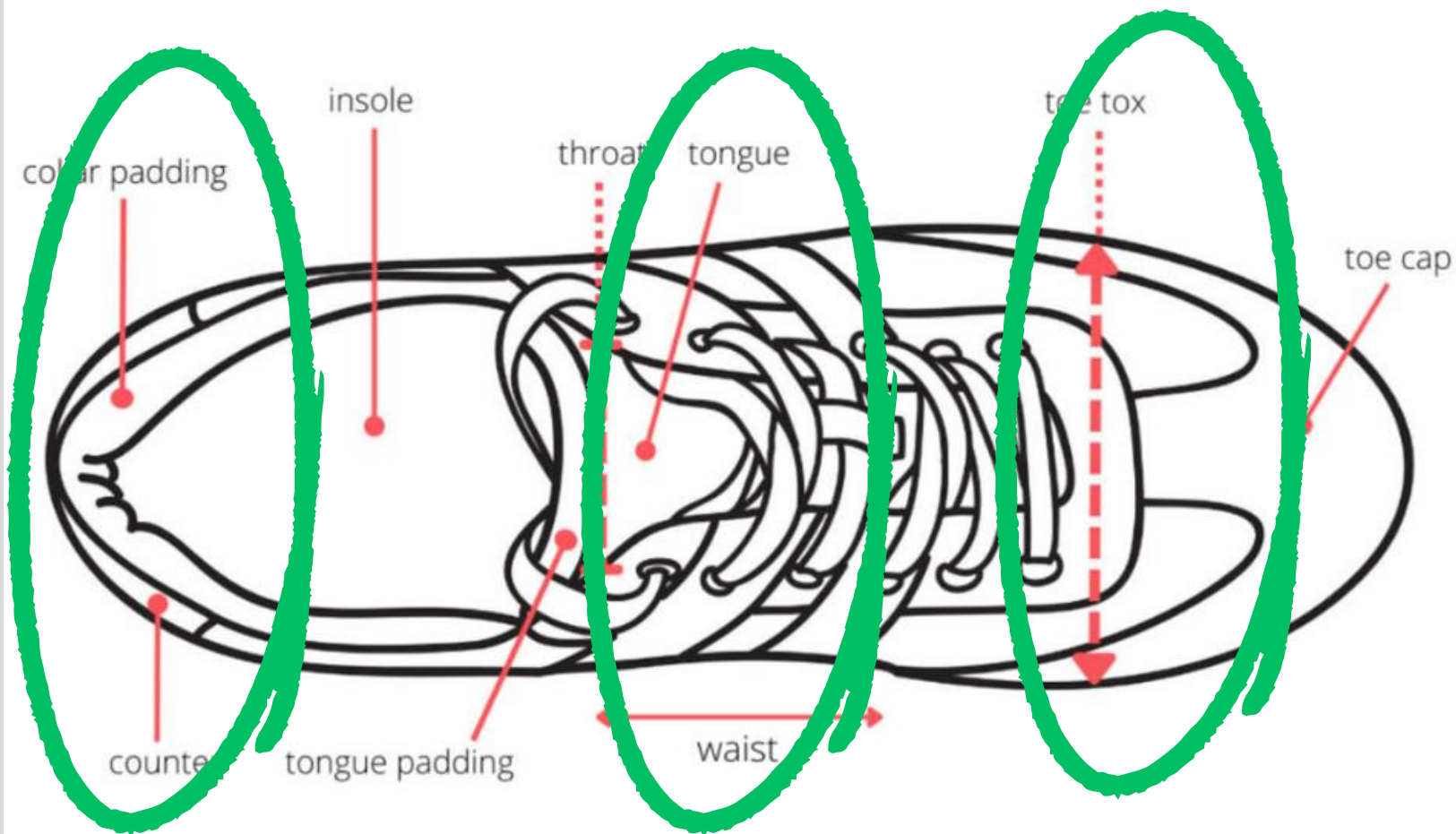
*Royal College of Podiatry Conference 2023
Liverpool, UK*



Based on the **Footwear Needs Conceptual Framework** study (to be published in 2024) by Thanaporn Tunprasert, Dr Stewart Morrison, Dr Leonard Henry Joseph & Prof Paula Kersten



How to determine 'fit for foot'?



Fastening
Foot change throughout the
day

Let's practice

Questions to ask - fit for foot

Let's practice

1. In standing, do you feel a squeeze anywhere?
2. In standing, can you wiggle your toes up and down, and spread your toes out?
3. Go on tiptoes, does it feel like the shoe is slipping off?
4. Go on tiptoes, is it difficult to bend your toes?
5. Stand on one leg and close their eyes, are you more or less stable compared to barefoot?

Don't forget to also consider socks/stockings

Fit for person & purpose

Person

- Age
- Medical history
- Medications
- Weight
- Physical ability
- Climate

Footwear safety?

Purpose = what activity will the shoes be used for

- Standing
- Walking
- Running
- Specific movements

- Intermittent
- Prolonged
- Combined



Shoe grip

Chef

Shop worker

Commuter

Road runner

Trail runner

Hiker

Basketball player

Shoe outer sole

Shop worker

Postman/postwoman

Road runner

Sprinter

Weightlifter



Hardness?

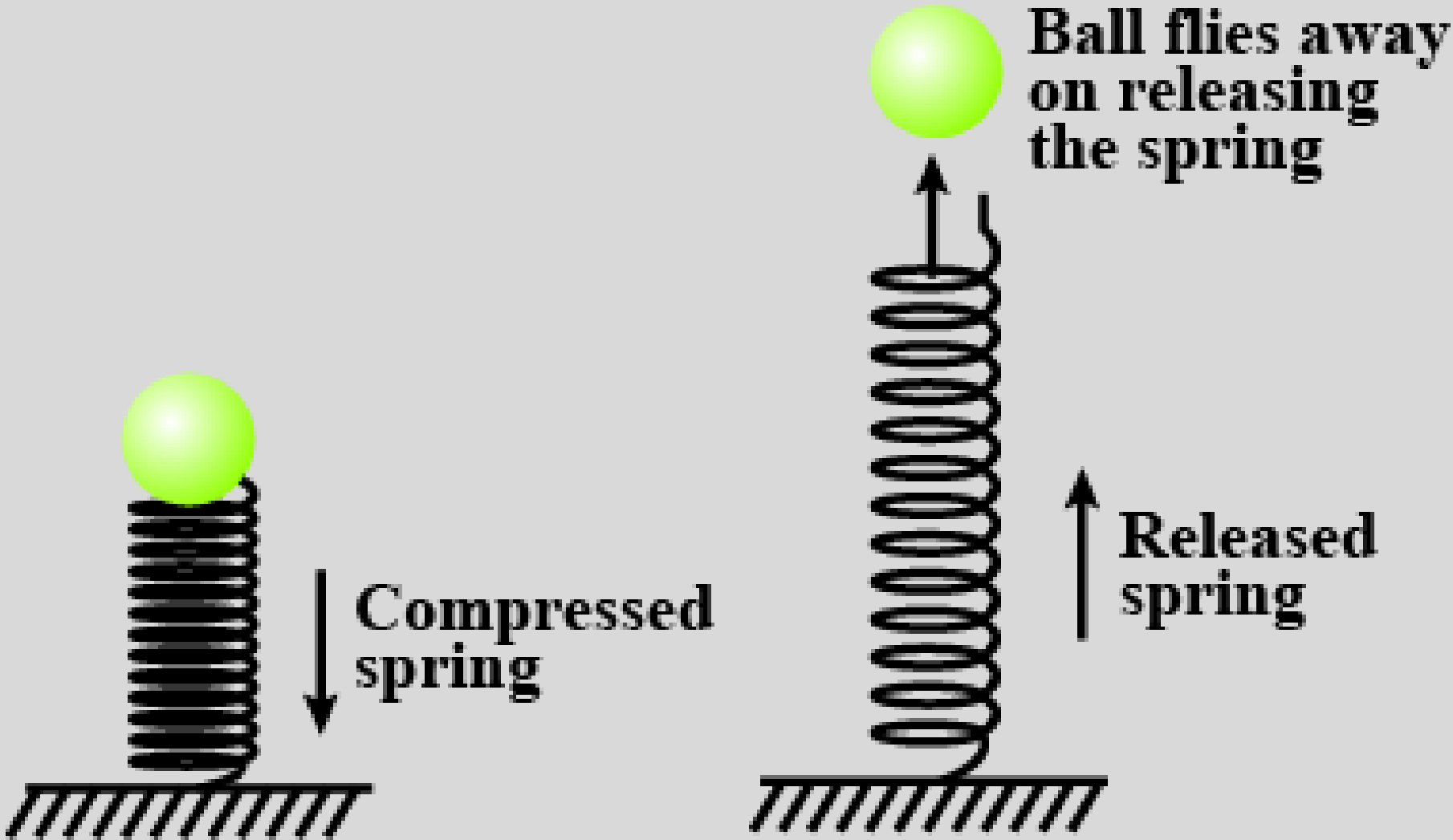
Thickness?

Impact reduction?

Performance?



Spring effect

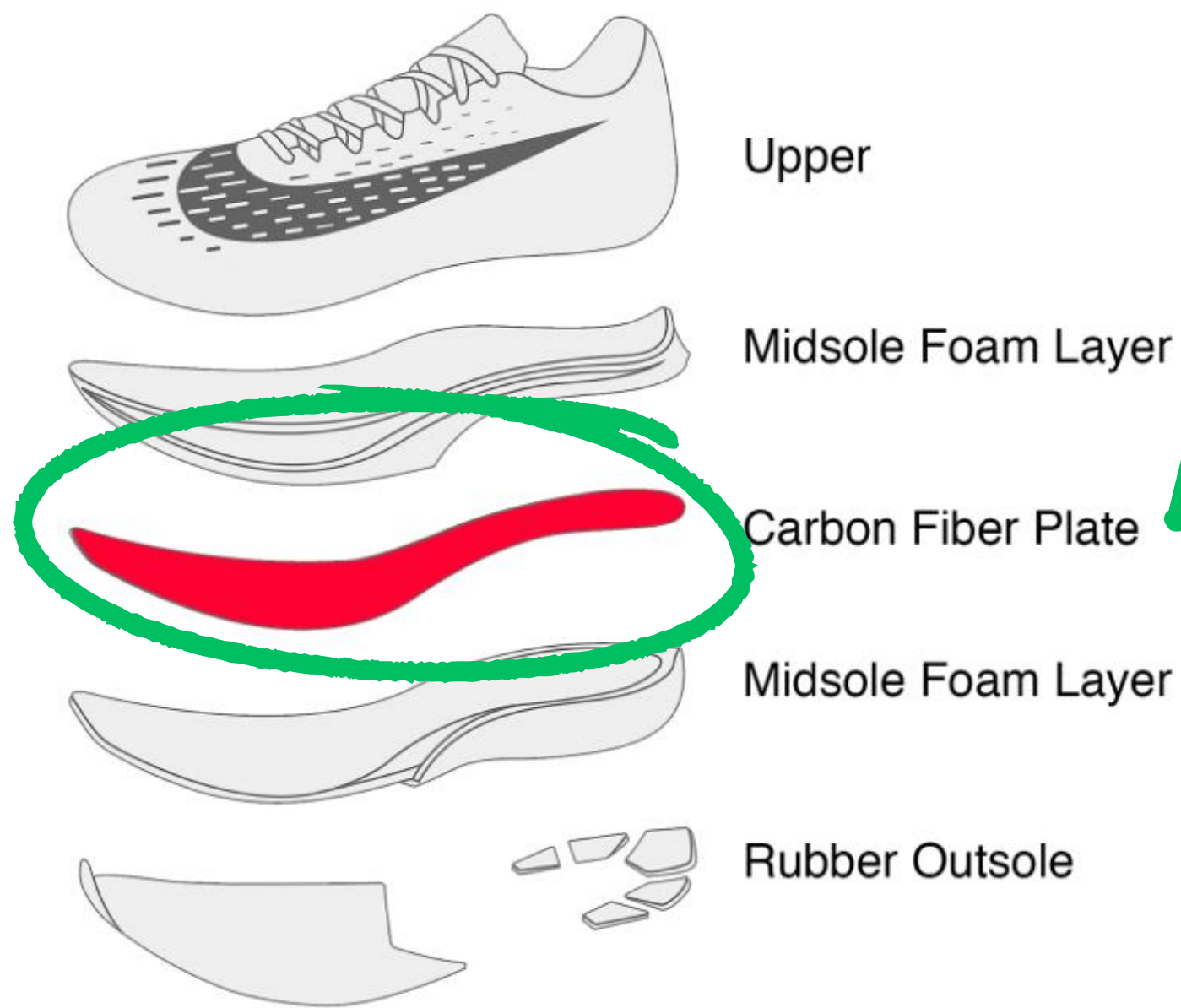




**Energy
storage and
return**



31 mm



Prolonged standing





Load



Beam

Initial Stage



Deformed Beam

Final Stage

SHOE MATERIALS SYMBOLS



GENUINE LEATHER
OR FUR



SLIP RESISTANCE ON
CERAMIC TILES WITH NaLS



POLYVINYL CHLORIDE
OUTSOLE



WATERPROOF
MICROFIBER UPPER



UPPER



COATED
LEATHER



SLIP RESISTANCE ON STEEL
FLOOR WITH GLYCERIN



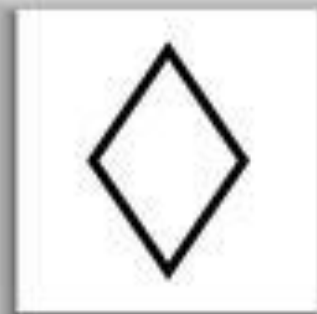
POLYURETHANE
OUTSOLE



WATER RESISTANCE



LINING AND
INNER SOLE



SYNTHETIC,
OTHER MATERIALS



SLIP RESISTANCE
SRA + SRB



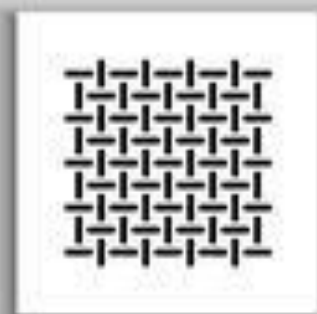
DOUBLE-LAYER
POLYURETHANE OUTSOLE



ELECTROSTATIC DISCHARGE
RESISTANCE



OUTSOLE



TEXTILE,
FABRIC



CORK
OUTSOLE



DOUBLE-LAYER POLYURETHANE
WITH RUBBER OUTSOLE



METAL DETAILS
FREE



METAL OR
COMPOSITE TOE

Materials

Climate?

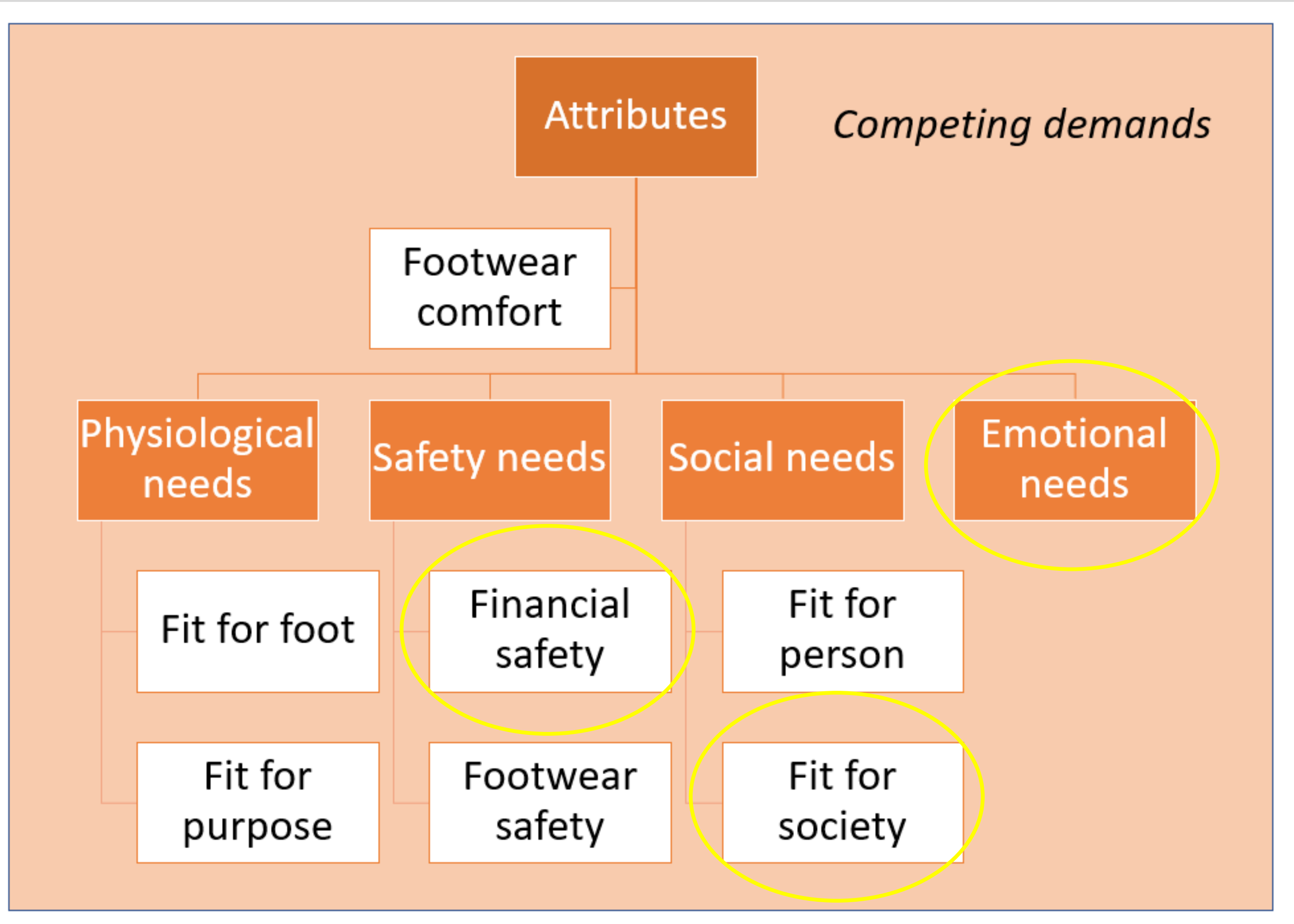
Activity?

Breathability?

Protection?

Shoe weight





Comfort

- Physical comfort
- Psychological comfort



What is comfort?

Currently no agreed definition related to footwear comfort

However, some descriptions might be relevant...

- An absence of discomfort and beyond
- When the shoes make you forget that you are wearing them

So essentially, we can rely on patients' reports about footwear comfort whether the shoes fit for them & their purpose...to a certain degree

But when might this method not work very well?





Examples

- Neuropathy
- Softness = comfort
- Other competing needs (fashion, social, uniform)
- Confidence / self-awareness



Alice

20 years old

Fashion degree student

Ehlers-Danlos Syndrome - generalised hypermobility

Pronated feet

PTTD stage 2

Ankle pain

Is this the right shoe for Alice?

Questions?

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