Case 2

26 yr. female

bilateral leg pain, diagnosed as CECS by physician

novice runner

can run 25 mins maximum, then cramps antero-lateral leg

only running related, no pain in ADL

cadence 154

1 - Key findings

a. Large bounce with hard landing: increased loads on knee and lower leg

b. Excessive knee extension and ankle dorsiflexion and large tibial inclination on heel strike: increased loads on knee and lower leg

c. Small knee flexion in midstance: reduces shock absorption and increases loads on lower leg

d. low cadence of 155

2 - Gait retraining or not?

Yes

3 & 4 - Training goals and how to achieve them

a. Increase cadence to > 170

- will likely sole many other problems like stride length and extended knee on heel strike.

- education why this is important

- use auditory cues (e.g. metronome or music with specific beat)

b. Run with bounce < 10 cm

- education why this is important

- running in front of a mirror (visual cues)

- using verbal cues (e.g. imagine you run under a low ceiling)

- use auditory cues (e.g. listen to the sound of the landing, now run as silent as a Ninja)

- hopping and skipping drills

5 - Potential barriers

a. Progress to quickly: build up the cadence in 5% increments

b. Patient might have limited dorsiflexion in the ankles: check and improve if possible