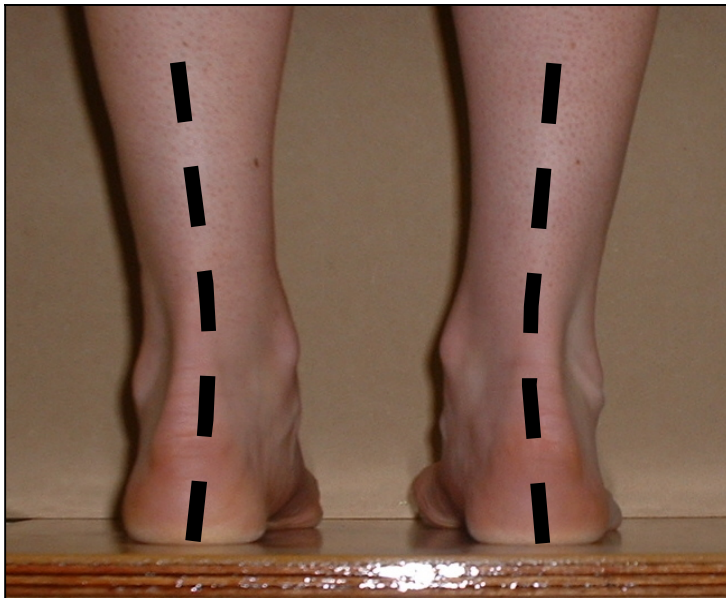


## CASE STUDY- For more details contact Nick Dinsdale as above.

<b>Name of Patient:</b>	Female
<b>Age:</b>	
<b>Sport / Occupation:</b>	Mountain walking / circuit training
<b>Level of Activity:</b>	2 – 3 times weekly
<b>Condition:</b>	General fatigue in the lower limb after prolonged standing and walking

### BEFORE fitting customised orthotics



#### Symptoms:

The patient consulted use with regard to lower legs ache and become fatigued after prolonged standing and weekend walks.

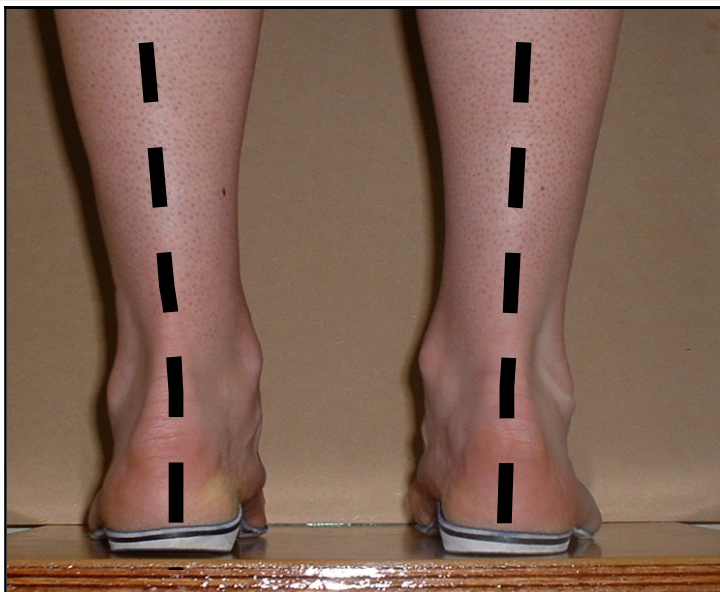
#### Biomechanical aetiology:

A major cause or contributing factor is bilateral excessive subtalar joint pronation (this is when the feet roll inwards). This adversely affects the biomechanics and transmits adverse stresses up the kinetic-chain. Muscles in the lower limb become prematurely fatigued with potential to cause overuse injuries.

#### Examination:

- Both medial longitudinal arches lowered.
- Excessive bilateral subtalar joint pronation between 7° – 9°.
- Formation of hard skin under 1<sup>st</sup> & 2<sup>nd</sup> metatarsal heads due to abnormal loading.
- Moderate Hallux Valgus of right foot.

### AFTER fitting customised orthotics



#### Agreed Treatment:

Custom carbon fibre shell orthoses were fitted, thereby improving the biomechanics of the lower limb. This action reduced excess pronation at the subtalar joint. By reducing pronation less stresses ascend the kinetic-chain, with less muscle fatigue.

#### Outcome:

After almost 4 months of wearing the orthoses for aggressive fell walking, the patient is well satisfied. The symptoms had disappeared. There has been a reduction in the formation of hard skin on the plantar surfaces; this is a result of an improved and more uniform plantar pressure distribution with reduced load bearing stresses. As a result of the improved lower limb biomechanics, one would expect medium to long-term benefits owing to reduced stresses ascending the kinetic-chain.