

# RUNNING TRAINING

## TIP #8

### RUNNING SURFACES

Running on different surfaces places different stresses on the body. Studies show that running on a hard surface in comparison with a soft surface, does not increase the prevalence of injury. When running on hard surfaces we adopt impact moderation behaviour to allow our body to absorb shock. On soft surfaces, we adopt stability behaviour. However if we have any intrinsic or extrinsic mechanical problems our ability to adapt may decrease over distance and the risk of overuse injury increases.



Running on a very level surface like road or treadmill uses very repetitive gait patterning. Choosing a variety of surfaces will help avoid the repetitive nature of running. Trail/cross country is generally the preferred surface of choice. The natural irregular surface stimulates natural absorption reflexes, increases proprioception and provides a variety of movements thereby reducing repetition.

**There are times that we need to choose a surface according to biomechanical issues and pathology.**

**Irregular surfaces:** can be dangerous as they increase the risk of traumatic injuries. If you have had ankle sprains it is best to run on road, track or treadmill.

**Running uphill:** decreases impact and increases push off demand. If you suffer from patellofemoral or Achilles problems avoid up hills.

**Running downhill:** increases impact and increases the braking phase. If you have Metatarsalgia or ITB problems avoid downhill running.



**Patellofemoral dysfunction:** This is often caused by inability to control pronation and absorb shock. The worst surface to run on would be sand as it requires stability behaviour. The road may create too much impact and is not recommended. It is best to run on grass or a track.

**ITB Syndrome:** Avoid even, regular surfaces. Avoid camber on the road as it essentially creates a “leg length discrepancy”. The recommended surface is gentle trail with mild variety or run on a track. When running on a track change direction every few laps to avoid creating a “leg length discrepancy”.

**Achilles Tendinopathy:** If the surface is too hard it increases tensile strength needed for push, which stresses the tendon. On the other hand sand increases dorsiflexion and makes it hard to push off. It is best to run on a softer surface like grass/ turf/ trail. **Stress fracture:** Run barefoot on track to ensure good control.

**When making changes from one surface to another be cautious and adapt slowly to the new surface.**