

A guide for Running Faster and Injury-Free from Gold Coast Physio & Sports Health

1. The Pelvis must be stable in space

✧ Your pelvis should travel in the same plane and not bounce up and down. It should not twist or drop. The pelvis forms the base so both your legs and your arms/upper body can move off a stable platform

2. Torso and pelvis stable

▼ torso & pelvis form a “double triangle” (tips of shoulders to sternum, sternum and pelvis)



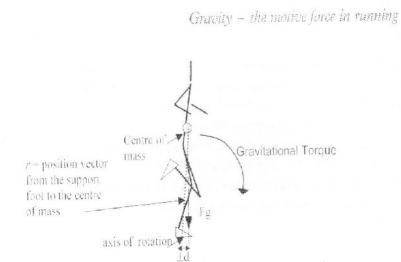
✧ Most runners need to focus on keeping these triangles in the same plane & arms and legs flex & extend from these trainagles. This maximizes the energy stored by elastic recoil in muscles (ie. imagine a rubber band stretching and recoiling without much effort)

3. Forwards lean

✧ As the centre of mass of your body moves in front of the contact point on the ground (ie. your foot), a gravitational torque will help accelerate you forwards (ie. you will essential “fall” forwards over your foot)

4. Foot strike must be directly underneath your hip

✧ this allows you to “fall” forwards & reduce the ground reaction force that is trying to decelerate you



5. Good Foot, Achilles and Calf Strength. Be a Stiff Spring!

✧ Foot acts as a structure to transfer forces from body to ground so should be stiff & strong to help this. A stiff lower limb will act like a stiff spring and will rebound from the ground easier than a soft, slinky spring.

6. Compact arm swing

✧ elbows bent <90degrees

✧ arms extend backwards behind the line of the body (not in front)



7. Cadence & step length

✧ keep your cadence high & a small step length as this will help get your foot strike closer to beneath your body & minimize decelerating & foot contact forces. Aim for 160+ steps per minute.

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- Y Be patient when trying to change technique: your new technique will be a happy “mesh” of your habitual technique & the “ideal” technique: this change will take 3-6months minimum with regular practice.
 - ie. to improve the awareness of your limbs in space & point of foot strike will take millions of repetitions
 - ie. to strengthen muscles will take a minimum of 12weeks
- Y Ideally, practice some Drills before each run
- Y Discuss with your Sports Physio or Podiatrist the appropriate type of shoe for your foot function & whether you need orthotics
- Y If you are interested in barefoot running, I believe you should condition yourself to this over a period of 12-18months & I would advise discussing appropriate foot/calf/Achilles exercises with your Physio prior to starting (check our website article on barefoot running <http://www.mygcphysio.com.au/services/articles-useful-info/barefoot-running/>)
- Y Finally, use a Sports Physio who understands running if you have a running injury as your management and care will be much more specific and will help you achieve your goals sooner

Happy Running!