The Trials and Tribulations of a cyclist trying to RUN!!

As a Biomechanist always looking to get a greater understanding of all things physical, I threw myself fully into supporting and entering the Xterra races. To say that I loved it is a gross understatement, and with last Sunday's race being my first foray into the off-road running world, I am hugley proud of getting through the 14km in 1.08 – pain-free and high on adrenalin!! As a cyclist though, I felt it prudent to shed a little light on the difficulties of cyclists trying to get a little cross-training and winter base work under their belts – and the potential hazards that can present themselves.

I am a cyclist, passionately so. And I am sure a huge amount of Total Sport athletes would admit to having the same longing desire towards their expensive piles of carbon, aluminium, rubber and if lucky, something ceramic!! As a cyclist however, we work very much in a completely supported and structured environment – namely your bike. So how then, does one extrapolate the same potential degree of structure and efficiency to their running mechanics?? The answer is Very Difficultly!

Why?

A 'normal' rider will most commonly do one or most of the techniques listed below:
- overuse their hip flexors when in the recovery part of the pedal stroke, hence
- underuse their hamstrings in the recovery phase.
- overuse the outer quadriceps (Rectus Femoris) during the push phase, hence
- underuse their inner quadriceps (Vastus Medialis Obliquus) during the push phase.
- overuse Gastrocnemius (top calf muscle) during the push phase (toe down), hence
- underuse Soleus (lower and inner calf muscle) during the initial recovery phase.
- overuse the long spinal muscles with the spine in loaded flexion, hence
- underuse the deep abdominals (Transversus Abdominus) to hold and stabilise the vertebrae.

As a runner what is the ABSOLUTE foundation to an efficient, and injury free, running technique is the ability to maintain an upright, 'neutral' pelvic tilt. What this in essence means is that the front, or pubic, part of the pelvis is flat in the vertical plane. Now as cyclists we ride with our pelvis slightly rolled forward and (very importantly) our spine entirely flexed forward. The significance of this is that we as cyclists don't have to use our deep stabiliser abdominal muscles to keep our backs safe, but as a runner you very much do. Now in both codes we see, under clinical test conditions, is that very, very few indeed ride or run with these 'core' muscle groups activated – hence predisposing themselves the slower, harder times, and increased risk of knee, hip and spinal injuries.

As a basic source of suggestion, I very much say to my cycling clients that they really do need concentrate on their ankling technique, their ability to 'sweep' the ankle across the bottom of the phase and recruit their hamstrings on the revovery, push a flat foot down through the push to get a much gluteal 'awareness', as as a cyclist-trying-to-run if you don't utilise this method then the dominance of the muscles at the front of the hip/pelvis means that you simply can't get that pelvis upright and vertical.

FOUNDATION FACT: As a cyclist the leg is in a fixed arc under the position of the saddle, as a runner, the legs are a pedulum under the stability of the pelvis, and any alignment incorrection will put the front, back and side-to-side muslce groups out of an efficient firing position. What keeps this safe and efficient form is the natural tone and awareness of transversus, the abdominal 'core' muscle.

Remember, get that spine completely upright in line with gravity. Don't lean forward, don't slump forward.