Maintaining Structural Balance
Here are some examples of structural imbalances and exercises you can do to become a more balanced athlete. A full description and photos of each exercise can be found by clicking on the icon below.

Shin Splints: (which can often turn into stress fractures) The calves and deep leg musculature obviously get tight from running and even cycling. They can become overdeveloped and tight, while the anterior leg muscles, which are small and almost seem non-existent in comparison. The tight posterior force along with weak anterior leg can lead to a shearing force causing shin pain.

Key exercises:
1. Gastroc and soleus stretch to lengthen
2. Toe taps to strengthen

Low Back Pain: Hours in the saddle flexed forward and pedaling the bike can significantly tighten the hip flexors of the anterior hip. As they become tighter they can pull the pelvis forward, placing strain on the low back. When the small trunk musculature and core are weak the result is anterior pull, causing back pain to develop.

Key exercises:
3. Half kneeling hip flexor stretch to lengthen
4. Plank core work to strengthen
**Knee Pain:** When the quads and ITB become tight from miles of pedaling and running without an equal amount of strength from behind (literally), extra force and strain can be loaded to the knees. Restrictions, knots and tightness can easily build up in the quad, and all those hours spent moving forward don’t allow the glutes to fire. These large muscles have an important role in stabilization of the hips and trunk. Weakness here can also contribute to extra pounding to the knees.

**Key exercises:**
5. Quad stretch, ITB foam rolling, to lengthen
6. Side steps with tubing to strengthen

**Shoulder Impingement:** Leaning for hours on those aero bars following repetitive reaching forward from swimming can significantly tighten the pectorals, neck and chest muscles. Without addressing the rhomboids, middle trap, lower trap and posterior shoulder muscles, extra strain can be placed on the front the shoulder causing irritation, inflammation and a sore shoulder making even simple daily activities like combing your hair painful.

**Key exercises:**
7. Corner stretch to lengthen
8. Rowing to strengthen

As the miles start to increase, provide your machine with proper structural balance and smooth, efficient, and less painful performances will be the result.