Life CHIROPRACTIC
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Balance and Athletic Performance

Do you know any athletes in our community who are looking to expand their performance potential?

To become a high-performing confident and successful athlete, it is essential to have a well-rounded training program. This training program includes the development of sport specific skills, strength training, mobility training, and one component that should never be overlooked, protection from injury.

Complex balance training is vital for both athletic performance and protection from injury for several reasons.

- **Protection from Injury:** Improved balance enables athletes to produce and maintain body stability, mobility and control. This stability, mobility and control, especially with bodily speed and bodily force being produced during training and competition, can reduce the risk of falling with the potential result of a concussion/traumatic brain injury. Athletes with strong balance are less likely to lose their footing or stumble during training or competition.
- **Core Strength:** Balance training engages the core muscles which are all the muscles which attach to the spine, pelvis, ribs, shoulder blade, neck and skull; in other words, most of our muscles and not just the abdominals and lower back. A strong core is essential for maintaining strong posture, stability, and mobility during athletic movements such as running, jumping, lifting, quickly changing direction and quickly stopping as the old saying goes "on a dime."
- **Proprioception:** Balance training enhances proprioception, which is the ability to sense position, orientation and movement of the body in time and space. Internalized proprioception improves body awareness and control which is vital in sports that require precise movement and balance adjustments without the slowdown of thinking "what do I do next."
- **Core Strength for the Ladies:** The core is the stable base for the pelvis, hips and lower legs/knees so powerful dynamic function can be produced. The core is the stable base for the trunk and shoulders to connect with the lower body. The legs/knees cannot be safely decelerated without core stability.

Basic Introduction to Title IX

- **June 23, 1972:** Title IX became law.
- **June 1975:** The final regulations were issued.

The regulations implementing Title IX require all schools receiving federal funds to perform self-evaluations of whether they offer equal opportunities based on sex.

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Title IX Impact (as of May2014)

- The number of girls in high school sports had increased more than 900%.
- Benefits of athletic participation for adolescent females include: enhanced academic success, improved bone health & lower rates of obesity, diabetes, pregnancy & depression.

Increased Participation vs. Injury Rates (as of May 2014)

- 70% of all ACL injuries are non-contact injuries.
- High school and collegiate age women are 3-4 times more likely to suffer a non-contact ACL injury than males competing in the same sport.
- In the US, 20,000 to 80,000 high school female athletes experience ACL injuries each year.
- Despite treatment, knee &m ankle injuries increase the risk of premature osteoarthritis.
- ACL injuries typically require surgery & rehab: cost $17,000 to $25,000 per injury (probably quite low)

Non-Contact Mechanism of Injury

- Deceleration which increases valgus and internal rotation moments: Down & In
- Deceleration which produces hyperextension which occurs during quadriceps dominant jump landing (landing with knees extended)

Prevention is the Key

- Expanding body of research to show that prevention works
- Therapeutic Exercise can significantly reduce ACL & LE Injury rates. LaBella, C.R., Huxford, M.R., et al. **"Effect of Neuromuscular Warm-up on Injuries in Female Soccer & Basketball Athletes in Urban Public Schools"** Archives of Pediatric & Adolescent Med. 165 (11), Nov. 2011.