Balance is a fundamental skill needed in gymnastics. It is defined as the ability to control the body’s center of gravity over its base of support. There are many physiological contributions to balance including: visual, vestibular, and proprioceptive input. Sensory information is processed by the brain and sent back to the muscles. Neuromuscular control is the ability of the muscles to use that information and control the body in all planes of movement.

Balance training begins with teaching the athlete to form a stable base with the foot. I use a tripod as an example where the ball of the foot, 5th metatarsal and the heel are my points of contact on the floor (see figure 1). To train the foot to be a stable tripod we begin with an arch raise exercise (Fig. 2). Start with the foot in a relaxed, flat foot position and have the athlete slightly raise the arch by pressing down with the big toe (not toe gripping). The athlete should feel all three points of the tripod pressing into the ground. This will put the arch in a more neutral position and increase neural information to the brain and improve muscular control.

Once they have a stable tripod, the next step is to teach correct knee, hip, and trunk alignment. Most gymnasts lock the knee out when balancing. Locking the knee is easier, but is not as functional as maintaining a slight bend at the knee and at the hip. The knee should be in line with the second toe and trunk should be neutral, not flat or too rounded. This position increases neuromuscular control and is much more functional (fig 3). The athlete should practice holding this position until they lose balance or become fatigued and unstable.

After correct static balance is mastered, then balance training becomes much more fun. Balance progressions can involve many variations but should include dynamic balance in all planes and then...
progress to unstable surfaces such as a Dynadisc or Bosu ball. I like to begin with a simple balance squat and reach, squat and lateral leg reach, and then a diagonal leg reach. This allows the athlete to train in all 3 planes of motion (fig 4, 5, 6).

Adding external resistance such as elastic cords, dumbbells and body blades to balance exercises significantly increases the level of difficulty and allows you to make it a total body exercise (Fig 7). Utilizing stability pads or Bosu balls to provide an unstable surface increases neuromuscular control and is more functional to the gymnasts that must have the ability to stick landings on an unstable exercise mat.

In conclusion, balance training is an essential part of gymnastics skill development. By focusing on a good tripod stance and proper body alignment, balance training becomes a total body exercise. It increases body awareness, increases neuromuscular control, and even helps to decrease injuries.