

Balance

Integral to stability is balance. You must maintain balance to have stability. You maintain balance through subtle movements of your body, not by gross body movements. Large movements may overcompensate and require further compensation in the opposite direction. Use your arms for defense and attack, do not swing them around for balance. If you extend your arms for balance, it leaves you open to attack. Maintain balance using minute movements of joints, muscles, head, or feet. If minute movements are not sufficient to maintain balance, then move your entire body into a new position that is in balance.

What is involved in Balance?

What is primarily the interaction of the following systems to maintain one's equilibrium:

- Vision: Messages are sent to the brain about position and movement.
- Inner Ear: The inner ear is key to the balance equation. It also sends signals to the brain regarding position.
- Proprioception: Proprioception refers to a sense of joint position. Tension, pressure, stretching in the muscular system send signals to the brain via the sensory receptors.

Breaking the balance of an opponent, means you are causing the opponent to lose balance or to be off-balance. Some principles of breaking balance include:

- There are eight directions of off-balance. The directions are best described by relating them to the directions of a compass. The eight directions are north, northeast, east, southeast, south, southwest, west, and northwest. You should push or pull your opponent in one of these directions to cause them to become off-balanced. If opponent is already in motion, pull or push the opponent in that direction cause them to become off-balanced.
- Coordinate all parts of your body to force your opponent off-balance, do not rely on just your arms.
- Take advantage of your opponent's long reaction time. When your opponent is distracted, such as when concentrating on an attack, he or she is not thinking about balance and will react slower to being forced off-balance.
- Keep your center of mass lower than that of your opponent.
- The abdominal region of the body coordinates balance for the entire body since it connects and supports the upper and lower extremities of the body, has some of the largest and strongest muscles in the body, and it contains about one-third of the body weight.

Keep hips and waist pointed in the same direction as the toes of your weight-bearing leg.

When fighting, no matter the stance you use, you will usually have most of your weight loaded onto one leg or the other. For maximum stability and power, keep your hips and waist pointed in the same direction as the toes of the foot with that has most weight loaded onto it.

Ways to Improve Balance

Some principles of stability include:

- Stability is inversely proportional to the vertical distance of the center of mass above its base. The deeper the legs bend, the greater the stability.
- Stability is inversely proportional to the horizontal distance of the center of mass from the center of its base. The more the body leans, the less the stability.
- Stability is directly proportional to the area of the base. The greater the distance between the feet, the greater the stability.
- Stability is directly proportional to the mass. The heavier the person, the greater the stability.
- Stability in a given direction is directly proportional to the horizontal distance of the center of mass from that edge of the base. The closer the center of mass is to an edge of the base (while remaining within the base) the weaker stability is in that direction and the stronger it is in the opposite direction.

Some methods for cross-training for balance include:

- Eye Exercises: Performing eye exercises aids the visual aspect of balance.
- Resistance Ball Work-outs: Resistance balls are used by a lot of physical therapists to improve balance. Many muscle conditioning exercises may be done on this over-sized ball.
- Balance Boards: Balance boards come in different forms. Their main focus is on improving balance.
- T'ai Chi: Balance is considered the single most important movement skill in this art. It concentrates on utilizing the energy of gravity well.
- Yoga: Many Yoga exercises are done on one leg to enhance balance.
- Pilates: Pilates exercises emphasize on the stomach and back, which are key in maintaining balance.
- Slide Work-outs: Using a slide apparatus improves lateral movement and balance.