

## Power Program Camp, June 6-11 2007

# Power Breath

Elite athletes know that imposing any exercise program on a dysfunctional body only worsens dysfunction. You first have to analyze each person's unique posture and structure and design a program to correct their specific structural imbalances, by strengthening weak muscles, and stretching tight muscles and fascia. Only then you can train properly. But, one important function that affects all movement is often overlooked – breathing. Correct breathing is in rhythm with movement, is vital for both oxygenating your tissues and stabilizing your core.

Athletes at rest take 12-15 breaths a minute. The best tend to breath slowest and deepest. At 15 breaths a minute, you breath 900 times every hour, over 20,000 breaths every day. In concert with good structure and muscular development, breathing is an important source of power. The form and rhythm and timing of each breath affects every movement we make. Yet, most of the people we test breathe poorly. Imagine any other action in sport or in life that is practiced poorly 20,000 times a day. Disastrous!

The common faults we see are:

1. Chest breathing
2. Exhaling at the point of effort.
3. Breathing that is uncoordinated with movement.

### Three-Part Breathing

We teach power breathing for sport (and for life) as a three-step process.

#### **Step 1, and most important, inhale into the lower third of your lungs.**

This is the area most richly endowed with oxygen receptors.

The easiest way to learn is to pull the diaphragm down by sticking out your belly, the relaxed “belly breathing” taught in yoga for the last 3000 years.

As you improve, you learn to push the diaphragm down while holding the transversus in, so as to increase intra-abdominal pressure to stabilize the core. Start by teaching your clients belly breathing and work from there.

#### **Step 2, fill the middle third of the lungs by expanding the ribcage sideways.**

You should be able to place your fingers on the client's outer ribs, and feel the ribcage widen by at least two inches.

#### **Step 3, fill the top of the lungs by raising the chest.**

For many people, chest breathing is all they do.

They never properly oxygenate their tissues nor activate their Inner Unit, yet wonder why they fatigue easily, and cannot make powerful movements.

### Coordinate Breathing with Effort

The second major fault we see is exhalation at the point of effort. This practice arose primarily because academics whose biggest exertion was probably tying their shoes, told insurance companies that holding the breath during effort increases intra-abdominal pressure, raises blood pressure and puts the heart and arteries at risk. So, for insurance purposes, most gym clients have been taught for generations to exhale as they made an effort.

It is true that retained breath on effort raises intra-abdominal pressure. That's exactly how the body is programmed. Intra-abdominal pressure stabilizes the core. That's why you inhale sharply as a reflex when faced with a sudden threat. As part of our ancient fight-flight system, the body is programmed to inhale to stabilize the core to make the body as stable as possible for fighting or fleeing.

In the Power Program we take advantage of this superb reflex to apply maximum effort by inhaling immediately before effort, and momentarily retaining the breath during the rapid concentric contraction, then releasing the breath evenly during the slow eccentric contraction. Unless your client knows how to do this breathing, they will never be able to apply maximum effort. Worse, if they habitually use the exhale-on-effort nonsense taught in many gyms, they will be weak in movement and highly subject to back injury. At the Colgan Institute we teach boxers, martial artists and all combat athletes to strike their opponent just as he finishes exhaling, because that is when his body is weakest.

### **Small Hole Exhalation**

You can maintain your strength during exhalation by learning to exhale with the "small hole" technique. The easiest method is to push half the breath out suddenly through pursed lips, a technique taught to asthma patients to increase oxygen absorption. The sudden push momentarily increases pressure in the lungs, which also pushes down the diaphragm further and further strengthens the core. There is also a genetically programmed reflex retraction of the upper abdominal wall. More difficult, but far superior, is to learn to narrow the throat, for small hole exhalation, the way of controlling the breath taught in martial arts and in advanced stages of the Power Program.

To benefit most from the small-hole technique you have to coordinate the sudden push of breath exactly with the instant of greatest effort in a movement, or the point of impact in a kick or punch. Good examples are the "Ki-eee" shout in martial arts, and the closed mouth grunt of boxers at the moment they strike. Try the grunt yourself now, with your core tight, and feel your abdomen retract to further increase stabilization. Timing is critical, however, and we see many athletes make the forced exhalation *before* the point of impact. They immediately lose 10-20% of their power.

We also see a lot of people who expel all their breath at the impact point, thereby leaving themselves jelly weak for attack by an opponent, or unable to carry a power movement strongly to its conclusion. Teach your clients the right way, to expel half the breath suddenly then the other half evenly, to maintain core strength throughout.

At the Power Program Camp in June, we will have the advantage of yoga teacher Anna Anderson, whose practice centers on the breath. Join us at her classes and take another big step on the road to controlled power.