

## In This Issue:

Movement Principle - Front

Featured Instructor & Class - Page 2

Featured Article - Page 3

Upcoming Events - Back

October 2011

## Featured Movement Principle Shoulder Organization

The shoulder is a complex that consists of several interconnected parts. These various parts need to work in a coordinated & rhythmic fashion with each other in order for us to maintain proper and pain-free shoulder function. So, what makes up the shoulder complex?

- 1 The ball and socket/shoulder joint (glenohumeral joint)
- 2 The collarbone (clavicle)
- 3 The shoulder blade (scapula)

There is a reasonably loose fit of the upper arm bone into the shoulder socket, and this gives our shoulder girdle a high level of mobility, in contrast to our hip joint, which is much deeper, and therefore, more stable. The structure of our shoulder facilitates a wide range of motion in many directions, but often at the expense of joint stability - often times making our shoulders vulnerable to strains and overstretching during raised arm or reaching movements. Posture plays a very important role in assisting in the organization of the shoulder complex. Learning how to align the spine, head, neck and shoulders can be an effective means of helping you to avoid and/or minimize pain. Start with some simple exercises.

Roll the ball of the humeral head (upper arm bone) back in the shoulder socket by turning the palms of your hands outward. At this point, the chest may feel "wider". Next, pay attention to the position of your shoulder blades. You want your shoulder blades to be able to move in several directions: up toward your ears (elevation); down toward your hips (depression); away from the midline of your body (protraction); toward the midline of your body (retraction). The sense of "setting" or "stabilizing" the shoulder blades during movements of the spine, as well as the arms, is key. The act of stabilization occurs when the shoulder blades are pulled slightly in towards the spine (retracted) and pulled slightly down the back (depressed). You can practice this action by reaching toward the floor with the baby finger and gently sliding your shoulder blades down your back  $\frac{1}{4}$  to  $\frac{1}{2}$  inch.

The role of the position of the head and neck also plays a key factor in shoulder movement. The neck or cervical spine should hold its natural curve and the head should balance at the top of the spine with no undue tension in the neck or shoulders. Think about standing or sitting TALL. Elongate the spine through the center of the pelvis, the center of the rib cage and the center of the skull. Think of retracting the head (bringing the head directly back) and lengthening through the back of the neck. You do not want to "tuck" the chin - the head is brought directly back and rolls back on the stem of the spine like a ball setting on top of a golf tee and the lengthening comes from the back of the skull reaching upward.

The ribcage should be directly over the pelvis. You want to stay within your center (not flaring the ribs up and out, nor dropping the chest down). As mentioned above, staying TALL or LENGTHENING from the sit bones to the crown of the head will help with the ribcage position. Additionally, the abdominal muscles must often be recruited to maintain the rib cage in good alignment. Maintaining abdominal engagement can help stabilize the rib cage.

Being mindful of our posture and movement patterns takes time, repetition, practice, and patience. Integrating our upper extremity and our trunk increases functional reach and maximizes dexterity; and integrating our head and our trunk increases our awareness of the world through improved access to our senses of vision and hearing, enabling us to be more sensitive to sight and sound. Take time to practice these simple exercises - briefly & frequently - and as you do, enjoy the discoveries that you make about your own shoulder organization.

# Featured Employee

Julie Dillon



Julie is a certified Personal Trainer and group exercise instructor with AFAA. She is also certified by Stott Pilates in mat, reformer, cadillac, chair and barrels. In addition, Julie has been trained in postural analysis, injuries and special populations through Stott. Julie is passionate about teaching Pilates after experiencing firsthand the benefits by discovering a new level of body awareness and strength.

## Featured Class

### Shoulder, Upper Back & Neck Series

#### Shoulder, Upper Back and Neck - Level 1

We've designed this class as the first step to solving a persistent shoulder, neck or upper back problem. Each class provides some anatomical learning and exercises that bring awareness to areas of tension and how to relieve them. The majority of each class involves exercises that organize the shoulders, head, spine and pelvis in association with movements of the arms, using the Pilates Reformer and Tower. You will clearly understand how these exercises are similar to movements in your daily activities.



#### Shoulder, Upper Back and Neck - Level 2

of the arms with your spinal motion and stabilization... as you would when you vacuum or lift a bag of groceries. Once you have learned the basic anatomy and mechanics of the upper body; you'll learn to coordinate movements needs to be. You will clearly understand how these exercises are similar to movements in your daily activities. Pilates Movement goes all the way through your body from your foot to the outstretched arm to get your hand where it Equipment is used in this class.

# Featured Article

## *Proprioception & Kinesthesia* by Stefany Theunissen

If you close your eyes, could you tell where your hand is right now? Can you describe its relationship to the rest of your body and in space? The ability to determine where your hand is located is a function of the human body's unique and ever so important system, the nervous system. One of the functions of this system allows you to have an awareness of your body's position. This function is termed proprioception.

The word proprioception comes from the Latin word, proprius, meaning "one's own." It describes one's own awareness of position sense and where their joints are at rest. Kinesthesia is a closely related sensation. While proprioception describes where joints are at rest, kinesthesia refers to joints in motion. Imagine that you are standing with your arms along your side. If I were to move your right arm straight out to the side so that it was parallel with the floor, your proprioceptive system would allow you to mimic this position with your left arm, forming a T-like shape. Your kinesthetic sense would allow you to tell me the direction your arm was moved: Up.

How does this system work? We house several receptors, called proprioceptors, in our muscles, ligaments, tendons, fascia, and joints. These receptors respond to changes in pressure, position of a joint, or stretching of tissues. The information is picked up by these receptors, transferred through our sensory nerves to the spinal cord, and is processed in the brain. In response, our brain sends a message back to the muscle, ligament, tendon, or joint. This pathway is a feedback system which allows us to make adjustments in body position and motion.

We use these systems all day long in order to keep ourselves oriented in space and balanced. Having an appreciation for these systems will further develop the concept of how all our bodily systems work together in order to function in our daily lives. Without intact proprioception and kinesthetic sense we would have difficulty with things like walking to the mailbox or reaching for dishes out of the cupboard...even if we have enough strength and range of motion. More advanced skills, such as swinging a baseball bat or catching a football, also require a finely tuned sense of the position of the all the joints involved.



# Upcoming Events

Fall Education Series Event schedule coming soon

Check our website for details!

[www.mindfulmovement.biz/education-series](http://www.mindfulmovement.biz/education-series)

*Mindful* Movement &  
*Physical* Therapy

Mindful Movement is an exercise studio as well as a physical therapy clinic. We have a newly remodeled building with all the latest Pilates and GYROTONIC® equipment, and a staff of knowledgeable and certified instructors. We offer classes for the recreational exerciser such as zumba, mat and equipment Pilates and yoga for the young and elderly, and for those with specialty needs such as upper and lower back pain, arthritis, and shoulder pain.

2740 East Lansing Drive  
East Lansing, MI 48823

517-853-9139

[www.mindfulmovement.biz](http://www.mindfulmovement.biz)

"Encouragement is oxygen to the soul" -- George M. Adams