

# The Functional Awareness Approach to Use of Arms

Current Research and Practical Applications for Teaching the Alexander Technique

by Nancy Romita

This article provides information disseminated during a 2021 AmSAT Annual Conference session. The purpose of the presentation was to provide cueing strategies, share contemporary research from varying fields of movement science, and explore anatomical visualizations for the use of arms.

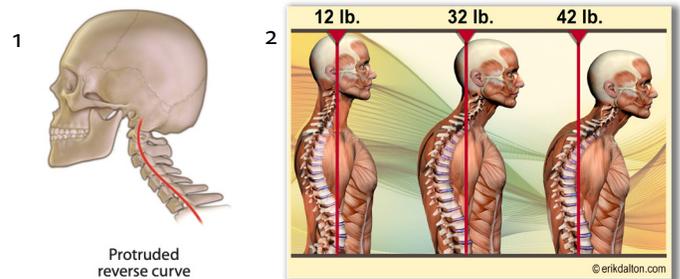


In *Constructive Conscious Control of the Individual*, F.M. Alexander states that the child is happy when engaged in something that interests it. The child is inherently interested in how things work. These same characteristics of curiosity apply when engaged in understanding our own patterns of use—how we work (Alexander

1923, 184). Alexander's work was visionary because he proposed this unique perspective to consider the relationship of the body's physical structure, how the body moves (movement function), and the role of habit (the use of the body in action). It has been my experience that students appreciate learning a bit about how their body functions. It provides information to unhinge "fixed ideas" and accept the body/mind sensations and shifts that occur during a lesson. Functional Awareness® is a somatic approach to embodied anatomy in which we investigate current research in functional anatomy and motor learning and design cueing strategies useful to people teaching, coaching, or learning various movement skills. These cueing strategies are designed to develop self-agency, self-care, and efficacy in action. One form of cueing explored in Functional Awareness® practices is anatomical visualization.

The primary focus in an Alexander Technique lesson is to impart the principles of sensory appreciation, inhibition, and direction. As a Technique teacher, I find integrating anatomical visualization supports student learning while guiding students through the Technique's procedures such as sit to stand, up on toes, walking, shallow bending, hands on back of chair. The research and literature used in Functional Awareness® are not specific to the Alexander Technique; rather, it encompasses research from various fields of movement science. While teaching the Technique, I draw on Functional Awareness® (FA) practices to enhance a student's understanding of movement function. Here is an example of that. One research study in dance science revealed that 65% of dance injuries are related to habitual "mis-stacking" of the skeletal structure (Leiderbach 2018).

This information supports F.M. Alexander's construct that daily patterns of use/habit can impact the body's well-being. I find this data useful to share with dancers and nondancers alike



"Head forward" position

as it is a quantitative measure of the impact of unconscious misuse on the potential for injury. The research supports the notion that small and unconscious repeated actions can have unintended consequences. Mindfulness in movement through the Technique is a pathway toward body/mind awareness. Awareness enables choice, and choice can facilitate greater ease of movement. Scientific research and anatomical visualization can contextualize the teaching of the Technique and support student learning.

## LET THE NECK FREE, HEAD FORWARD AND UP IN RELATION TO THE USE OF ARMS

The poise of the head and spine has an impact on the use of the arms.

Researchers Kim and Kim (2016) demonstrated that shoulder pain and injury have a correlation to what the authors call head forward position. The images above show what that study refers to by the term head forward position. This research is not new information to us as Alexander Technique teachers, but the information is useful as a resource to substantiate our work through data from recognized medical fields. The second of the two images corroborates research by Kim and Kim (2016) and that of Hasraj (2014) regarding head position. Study the three head, neck, and ribs images from left to right. Note how the glenohumeral joint (shoulder joint) shifts more forward and down as the skull juts further forward. Additionally, the mechanical force on the spine increases as the head moves forward on the sagittal plane. The head, neck, spine relationship has an impact on shoulder position. Anatomically the axial skeleton influences the appendicular skeleton. In my private practice as well as in university courses in the Alexander Technique, this image with a quantitative measurement aids in understanding why practicing Alexander's principles are useful.

Try this experiment: If you are an Alexander Technique teacher, forget what you know as such while following the first four instructions. Instead, place yourself in the situation of being a student new to the Technique.

### Relationship of Axial to Appendicular Skeleton Exploration 1

#### Part 1

- 1 Sit in a chair near the edge of the seat. Let the body slump and sit in a C-curve shape. Rest with your sacrum curved under (posterior tilt) and let the shoulders roll forward as a natural response to this sitting posture with the head looking out to continue reading or looking at a computer screen.
- 2 Slowly, while staying in the slumped position, lift one or both arms directly forward and then overhead without letting them drift wider on the pathway upward. If you feel resistance, stop.
- 3 Notice how this feels in the neck and shoulder region.
- 4 Return the arms to your lap or a comfortable resting place.

**Reflection:** Note how this action feels in the use of the arms. What do you notice about your shoulders? What's impinging this action in your arms when in a slouch position, and arms are moving overhead?

The arm structure has complex skeletal features, joint articulations, and many muscular attachments to the trunk or axial skeleton. The movements of the arms are inextricably linked to the actions in the spine. As Alexander Technique teachers, we understand this connection of torso to arms. It is useless to address the use of arms unless the student can practice the primary directions that provide integrity of use to the head, neck, torso relationship.

During the slump position, the postural organization of the thoracic spine encourages the shoulder blade into a forward tilt (elevation and protraction). This impedes the natural glide in the shoulder joint.



#### Part 2

- 1 Allow for a moment of inhibition/nondoing.
- 2 Invite a moment of sensing the body in its current place or state.
- 3 Think or “wish” (a nod to Walter Carrington 😊) to let the neck release, to allow the head to move forward and up.
- 4 This allows the spine to lengthen and the back to widen and may invite a shift in sitting position.
- 5 Now raise the arms overhead.
- 6 Notice how this action feels.
- 7 Return the arms to a comfortable place.

**Reflection:** Is there a difference in the ease of action in the arms? Thinking the directions permits a shift in the head, spine, and torso and enables the shoulder (glenohumeral joint) to rebalance. This is one example of a practice in learning the Alexander Technique. For some students, sharing a bit of the research in other fields of movement science provides quantitative information and an anatomical framework for the profound somatic experiences that occur during an Alexander Technique lesson.

#### TORSO TO LENGTHEN AND WIDEN

In Functional Awareness,<sup>®</sup> explorations using anatomical imagery are a cueing strategy to support efficacy in action. For example, visualizing the relationship between the pectoralis major muscle on the front of the chest and latissimus dorsi muscle on the back provides an anatomical cueing approach when encouraging a student to understand the Alexander Technique direction “the torso to lengthen and widen.” Current research in human anatomy examines the way in which tendon structures in the upper arm are configured to deepen understanding of anatomy for surgical procedures (Bois 2020) yet this same information is useful as an anatomical reference when teaching or learning the Technique.

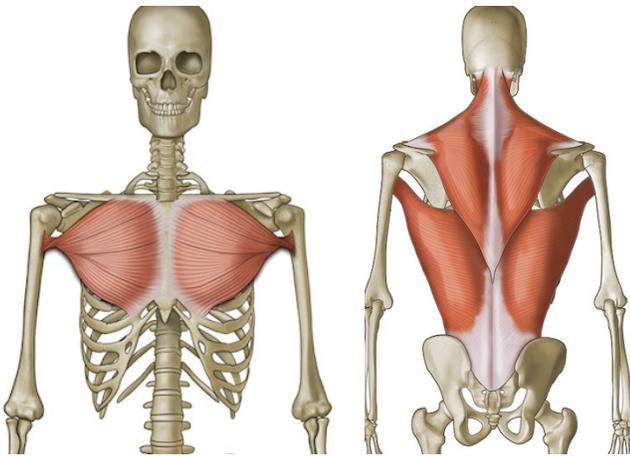
The pectoralis major and the latissimus dorsi are two muscles that support the width of the trunk and support the arms in action. Working together, these two strong, broad muscles also help stabilize the torso. The pectoralis major (commonly referred to as the “pecs”) is on the anterior side of the body at the chest. As seen in the figure below, the fan-shaped fibers run from the clavicle and sternum to the portion of the upper arm known as the lateral lip of the bicipital groove of the humerus. It is a strong muscle and has a major influence on the actions of the upper arm (Romita and Romita 2019).

On the posterior side of the body, the latissimus dorsi (commonly referred to as the “lats”) is the broadest muscle of the back. This large swath of muscle sweeps all the way from the sacrum at the base of the spine and inserts on the front of the upper arm near the insertion of the pectoralis major on the bicipital groove (see figure below). Note the spiral as the muscle inserts onto the front of the upper arm. This spiral invites an opening of the chest and dynamic resilience to support the many actions of the upper arm. This broad muscle on the back connects the pelvis and vertebral column to the arms, literally connecting the central support structure of the spine (axial skeleton) to

the arms (appendicular skeleton). Together these two muscles act like a sandwich board of support. If the central position of the body moves off-center or if the shoulders roll forward, an imbalance is created in the overall structure of both the arm and the back (Romita and Romita 2019).

### Anatomical Visualization Exploration 2

- 1 As you are reading, pause and allow for a moment of nondoing. Let yourself read the words while attending to the *means whereby*. Begin to think the directions to allow the neck to free, head moves forward and up and torso to lengthen and widen.
- 2 Examine the two images of the pectoralis major and latissimus dorsi and imagine the large swath of these two muscles and how they meet on the front of the upper arm.
- 3 Note if this visualization influences your somatic or body/mind understanding of length and width of the torso.



**Reflection:** Did you experience a body/mind shift when experimenting with the anatomical visualization? In the philosophy of Functional Awareness,<sup>®</sup> we invite you to let go of expectations. Undo expecting that something “should” occur. Instead, honor the experience you have. Each person employs differing conscious and unconscious cueing strategies to become aware of habit and move toward ease in action. One person’s “ah ha!” may be another person’s “so, what?”

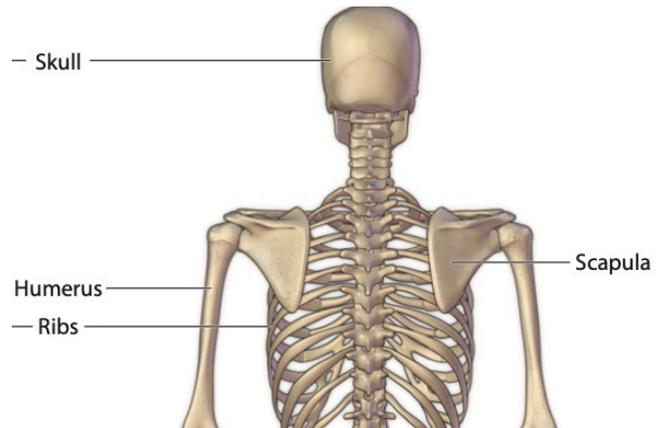
### LET THE “BACK BACK” AS ARMS MOVE FORWARD

A skeletal visualization can also help a student maintain the *primary control* of the balance of the head, neck, and spine while moving arms forward or reaching up in space during everyday actions. The top portion of the upper arm is called the head of the humerus. The head rests in a shallow socket called the glenoid. The illustration below depicts a posterior view of the skeleton. Note the back of the skull and the scapula (shoulder blades) as a reference point to register that you are looking at the back of the body.

From this view, we can easily see the head of the humerus, or upper arm bone, nestled into the shallow socket called the glenoid.

I am proposing that the posterior head of the humerus can be thought of as part of “back back.” The head or ball of the upper arm rolls back and down, gliding in the glenoid socket when the arm reaches forward. This action stabilizes the joint and encourages a synergistic relationship between the muscles structures to promote a balance between stability and mobility when using the arms. This short video (see link below) demonstrates the action of the head of the humerus as the arm swings in a sagittal or forward action. The anatomical imagery from the graphic image or the video might support the student’s experience along with the means whereby while moving the arm. The upper arm rolls back and down within the socket as the rest of arm releases out and away to reach forward.

VIDEO  
HUMERUS IN FLEXION  
([CLICK TO VIEW ON YOUTUBE](#))



### Anatomical Visualization Exploration 3

- 1 Before reading further, allow a moment to pause to allow for inhibition/nondoing. This permits us an opening to reconsider the way we move or read further. In addition, it facilitates expanded sensory awareness of ourselves in relation to the environment.
- 2 Allow for a bit of lightness by *thinking “up”*
- 3 Now, take a moment to look at the view of the skeleton from behind and visualize the posterior heads of the humerus bones as part of your consciousness when thinking “back back.”
- 4 While looking at the image of the skeleton, think of the back portion of the head of the humerus as part of your whole back while you swing one arm forward in space.
- 5 Without looking at the skeletal image, visualize the head of the humerus as part of the whole back as you swing both arms gently forward.

**Reflection:** What was useful in this movement exploration? Is it helpful to consider an anatomical framework while actively engaging in inhibition and direction? Does some other information come forward while experimenting in this way?

The Alexander Technique allows us to move out of habit and into awareness. The trained use of hands to communicate sensory appreciation, inhibition, and direction is the essence of the teaching of the Technique. This practice guides and supports the student towards mindful movement. A teacher can facilitate a profound experience in a student without any of the information provided within this article. However, the anatomical research and visualizations provide a foundation for the teacher's understanding of the Technique. While teachers need not share this cognitive information with students, I have discovered that providing some information about how the body works can be useful to them. Like the child mentioned at the beginning of this article, some students are interested in how we work. This information is not used as a method for action but rather as a cognitive framework to then practice the means whereby. Understanding structure and function provides a kind of scaffolding for Alexander's directions. Using contemporary data from scientific research to substantiate Alexander's propositions from over 100 years ago only expands our reach for the populations we might serve and enhances our position in the fields of somatic movement education and body/mind wellness.

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