What's Up with the Upper Body?

By Connie Warasila

During the excitement of teaching our WATERinMOTION classes, we might misspeak while in an enthusiastic hurry to educate our clients. You may have instructed forward when you meant back, right when you meant left, or triceps when you meant biceps. It happens to all of us. In an effort to clarify the muscular cuing that we advise instructors to use during the second repetition of the choreography, this article will review some of the muscles of the upper body, their locations, their purpose, and some exercises used in WATERinMOTION to target those muscles.

You may be wondering why I've decided to focus on the upper body, considering its the lower body muscles that are the primary movers that increase heart rate and contribute heavily to caloric expenditure. I find many instructors are more familiar with and confident about exercising the lower body muscles. Admittedly, the lower body deserves our initial attention. The upper body movements are complementary to the main movement of the lower body and sometimes are forgotten in our instructions. That's unfortunate because the addition of strong, upper body movements contributes to upper body strength, flexibility, gains in coordination, and enjoyment of exercise. Surprisingly, adding upper body movements to lower body movements does not drastically increase overall caloric expenditure. According to the article “Making Sense of Calorie-burning Claims" by Robert A. Robergs, Ph.D., and Len Kravitz, Ph.D., “When upper body exercise is combined with lower body exercise, the increased heart rate and RPE response does not necessarily reflect a significant increase in caloric expenditure." They attribute this to the circulatory system's responsibility to provide oxygen to both upper and lower body, decreasing the amount of oxygen available for lower body work, the biggest contributor to overall caloric expenditure. Of course, for clients that may have lower-body, orthopedic limitations, adding the upper body movement may be critical to maximizing caloric expenditure since they may not be able to intensify their lower-body movements to use all available oxygen. But WATERinMOTION's goal is not only caloric expenditure. We strive to increase strength, flexibility, and fitness and skill levels, all while having fun.

So, do we need to concentrate on giving the upper body some attention? I say, “Yes.” After establishing the move (lower and upper body, during the first repetition of the choreography) instruction can progress to muscle usage. Focus can be on lower body muscle usage at first, but follow up with some information about the upper body. The upper body can be used for easy-to-identify turbulence, strength, playfulness, and movement style. Just make sure that you are educating your clients accurately to get the “biggest bang” for their exercise “buck”.

Arm yourself with information to share with your clients. If anatomy isn't your strong suit, take time to review it on a regular basis. You could take an anatomy class at a local college but it's not necessary. There are great books available that simply describe muscles and their usage. I particularly like “Anatomy of Movement Exercises” by Blandine Calais-Germain and Andree Lamotte.

Upper Body Musculature Review

Shoulder

Shoulder Movements using sternoclavicular, acromioclavicular and glenohumeral joints:

Action	Muscle
Flexion	biceps brachii, pectoralis major, anterior deltoid and coracobrachialis
Extension	posterior deltoid, latissimus dorsi, teres major
Abduction	supraspinaturs, medial deltoid, trapezius, serratus anterior
Adduction	pectoralis major latissimus dorsi, teres major
Medial rotation	subscapulaties, pectoralis major, latissimus dorsi, teres major, anterior deltoid
Lateral rotation	infraspinatus, teres minor

Shoulder Girdle Movements (involving the clavicle and scapula)

Action	Muscle
Flexion	serratus anterior, pectoralis minor
Extension	rhomboids, trapezius, levator scapulae
Elevation	rhomboids, trapezius, levator scapulae
Depression	trapezius, pectoralis minor
Downward rotation	rhomboids, pectoralis minor, levator scapulae
Upward rotation	rhomboids, trapezius, serratus anterior
Retraction	infraspinatus, teres minor, teres major
Protraction	serratus anterior

Arm

Elbow movements

Action	Muscle
Elbow Flexion	brachialis, biceps brachii, brachioradialis
Elbow Extension	triceps brachii, anconeus
Pronation	pronator teres
Supination	supinator

Choreography Review

Move	Joint Action	Muscles
HALF MOON ALT Arm sweep open/close	Shoulder Flex. & Abduction Shoulder Flex. & Adduction	biceps brachii, pectoralis major, anterior deltoid and coracobrachialis & supraspinaturs, medial deltoid, trapezius, serratus anterior biceps brachii, pectoralis major, anterior deltoid and coracobrachialis & pectoralis major latissimus dorsi, teres major
SWEEP DOWN & BACK Tandem arm sweep F/B	Shoulder Ext.	posterior deltoid, latissimus dorsi, teres major
Tandem arm sweep B/F	Shoulder Flex.	biceps brachii, pectoralis major, anterior deltoid and coracobrachialis
CURL TO SPIN Biceps curl R (spin in circle)	Elbow Flex. & Supination	brachialis, biceps brachii, brachioradialis & supinator
Biceps curl L (spin in OPP circle)		
Triceps press R (Spin in circle)	Elbow Ext. & Pronation	triceps brachii, anconeus & pronator teres
Triceps press L (Spin in OPP circle)		

Analyze the upper body movements of each track so that you can accurately inform and motivate your students to use their upper body. It will eventually become second-nature. You will be able to cue correctly in the heat of the moment and help your students increase their kinesthetic awareness, which can lead to more confident and effective movement. Your students will come to know which muscles to contract to move through the water's resistance, creating more turbulence and intensity.

The Big Takeaway: Teach lower body, primary moves first, then add the upper body movement. After you cue the lower body muscles involved in a movement, mention the upper body muscles that are also involved. And finally, know your upper body anatomy so you deliver accurate information. And that's what's up with the upper body.

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