

Baltimore Dragon Boat Club



**EXERCISE GUIDELINES:
Warm-Up, Cool-Down, and
Strength Training Exercises**

I. WARM-UP (Mayo Clinic, 2014)

- ✓ **Helps prepare your body for aerobic activity.**
- ✓ **Gradually revs up your cardiovascular system.**
- ✓ **Increases blood flow to your muscles and raises your body temperature.**
- ✓ **Helps reduce muscle soreness and lessen your risk of injury.**
- ✓ **Should focus on large muscle groups, such as core muscles.**
- ✓ **Will prepare your body for dragon boating, which may cause mild sweating but it shouldn't leave you fatigued.**

A. Stretching During Warm-Up

Static stretching has long been used in a warm-up, with the aim of enhancing performance and reducing the risk of injury. Recent reviews of the literature surrounding the role of static stretching question this practice. There is little, if any, evidence that stretching pre-participation prevents injury or subsequent muscle soreness. Although static stretching before activity might increase performance in sports that require an increased range of motion, such as dragon boating, static stretching can compromise muscle performance.

Dynamic stretching, on the other hand, does not seem to elicit the performance reduction effects of static stretching. Based on current evidence, dynamic stretching would be the preferred option for stretching during a warm-up.


The degree of stretching required in the warm-up depends on the type of sport. Sports in which increased flexibility is needed, such as dragon boating require a good degree of stretching. Additionally, those with high demands for a stretch-shortening cycle of high intensity, as in sprinting, are likely to require more stretching than those with low or medium stretch-shortening cycle activity, as in jogging or cycling.


B. Components of a Warm-Up (DeVasto, 2012)




A total warm-up program includes the following two components:

1. A general warm-up period may consist of 5 to 10 minutes of slow activity such as jogging or skipping. The aim of this period is to increase heart rate, blood flow, deep muscle temperature, respiration rate, and perspiration and to decrease viscosity of joint fluids.

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2. A specific warm-up period incorporates movements similar to the movements of the athlete's sport. It involves 8 to 12 minutes of dynamic stretching focusing on movements that work through the range of motion required for the sport, such as the walking knee lift. Sport-specific movements of increasing intensity, such as sprint drills, or jumping, follow this.



The warm-up should progress gradually and provide sufficient intensity to increase muscle and core temperatures without causing fatigue or reducing energy stores. It is likely that there are optimal levels of warm-up and that these will be related to the sport, the individual, and the environment.



Around 10 years ago, dynamic warm-ups started gaining popularity in the sports world as an effective method for athletes to prep before an event. Today, dynamic warm-ups are a standard routine for athletes ranging from amateurs to professionals.

C. What Is a Dynamic Warm-Up?



A dynamic warm-up uses stretches that are "dynamic," meaning you are moving as you stretch. For decades, static stretching, which requires holding a stretch for 10 or more seconds while motionless, was the most popular type of warm-up for athletes.

Dynamic Stretching is ideal as the core of a warm-up routine for several reasons:



- ✓ It activates muscles you will use during your workout. For example, a lunge with a twist is a dynamic stretching exercise that engages your hips, legs, and core muscles. Whether you are doing weighted lunges in the gym, or transitioning to a catch phase in dragon boating, the muscles involved have already been engaged during your warm-up.



- ✓ Dynamic stretching improves range of motion. So if you feel like you can barely bend over to tie your shoes after a long day at work, a dynamic warm-up routine can help you feel more flexible



- ✓ Dynamic stretches improve body awareness. If you don't warm-up and hop into the boat, it may take a while for your body to perform optimally. Moving as you stretch challenges your balance and coordination; skills that could help your performance.

✓ Warming up in motion enhances muscular performance and power. Studies reveal dynamic stretching before an activity, such as dragon boating or a work out in the gym can help you lift more weight and increase overall athletic performance compared to no stretching or static stretching. If you are trying to get stronger, build more muscle, or simply perform better, a dynamic warm-up routine is likely your best bet.

D. The Five-Minute Dynamic Warm-Up Routine

(Perry, 2013)

- ✓ Here's a dynamic warm-up routine that doesn't require any equipment, it will prepare your entire body for movement, and it can be completed in just five minutes. This basic routine can be used as an effective warm-up for many different activities, from dragon boating to a full body strength-training workout.

Complete 10 reps of each exercise below for 1-2 rounds

Lunge with a Twist

The forward lunge helps stretch the hip flexors and activates legs, gluteus muscles, and hips, while the twist stretches out the upper and middle back and activates core rotation. As you do the lunge, step forward, and then drop your hips. You shouldn't try to lunge too far forward so your front knee extends far beyond your toes. After you have lunged, slowly twist toward the side you are lunging for a more intense hip flexor stretch.



Knee to Chest

This exercise mimics the top of a running stride as you bring your knee toward your chest before striking the foot toward the ground. You can alternate each leg while stationary or do it while walking forward. Focus on bringing the knee cap into the chest by hugging your shin while stepping onto your toes with your opposite foot, which will give you more leverage.



High Kicks

High kicks help warm-up the hamstrings and improve range of motion. You can do them while alternating as you walk, or how I prefer, stationary while focusing on one side at a time. If starting with your right leg, extend your left arm straight out. Kick your leg up while keeping your leg and hand straight so that your toes hit your palm. Try to progressively kick higher, but complete this exercise while staying under control.



Hip Stretch With A Twist

It helps open up the hips and groin while stretching the core, upper, and middle back. Start in the push up position and bring your left foot up to your right hand while keeping your hips down and lower back flat. Take your left hand, twist to your left while extending your arm and reaching toward the sky. Come back to the starting pushup position and repeat on the other side.





T Push Ups

A T Push Up is a great exercise to help warm-up your upper body, especially the shoulders, while also activating your entire core. Start out in the push-up position, and then lower yourself down towards the ground. As you push back up, extend your left arm toward the sky while keeping your right arm stable and your hips from moving down, or up. Bring your arm back to the starting position, do another push up, and then repeat with the right arm.



Jump Squats (Advanced)


Jump squats are a great plyometric exercise for warming up the lower body. Because the exercise is fast, it requires a greater degree of force production and power than the other exercises on this list, so it's a more advanced warm-up exercise. Stand up with your feet about shoulder width apart while holding your hands behind your head, or on your hips. Squat down until the hips are about parallel with the ground, then forcibly jump off the ground. Land softly and repeat the jump.



Jump Lunges (Advanced)

Jump lunges are another great plyometric exercise for warming up the lower body. This exercise also requires balance to help activate your stabilizer muscles in your legs and hips. With your hands at your sides or behind your head, start with one foot extended forward and one behind. Drop your hips downward and forcibly jump into the air. While you are in the air, switch your legs so that your forward leg is now behind you and your back leg is now in front of you.





To make this dynamic warm-up easier, you can do some of the exercises assisted while holding on to a sturdy and stable pole or object. For example, you can do an assisted squat, or assisted reverse lunge, which makes both exercises much easier and more manageable. With the hip stretch, you can choose not to open up your shoulders, and with the T-push up, you don't have to do the push up.

E. A few more examples of Dynamic Stretching Exercises

Front to Back Leg Swing (Hamstrings, Gluteus muscles, Quads)

Begin by supporting yourself with one arm while swinging your opposite leg forward then backward. Keep your leg straight as it moves forward and stretches the hamstrings then as it comes back try to kick yourself in the butt to stretch the quads. With each swing you should take the stretch a bit further (10-20 times).



Sideways Leg Swing (Abductors, Adductors)

While holding on to your paddle for support, swing one leg at a time from side to side in front of your other leg (10-20 times)



Hand Walks (Shoulders, Core, Hamstrings)

Start by standing up straight up straight with your feet together. Slowly bend forward until your hands reach the ground, walk your hands until your body is almost parallel with the ground and then slowly walk your feet back up to your hands (Repeat 5-10 times).



Arms Swings (Chest, Shoulders)

Swing your arms back and forth across the body as you stretch your chest and shoulders (30 seconds to a minute).





Power Skip (Advanced)

This a good dynamic exercise in preparation for explosive movements. Skip across the field using powerful explosive motions. Try to emphasize height instead of distance while using big arms swings and high knee lifts (Try 20 skips each side).



Here is a list of some exercises that you can also include in your dynamic stretch routine:

✓ **Jogging in place**

✓ **Jumping jacks**

✓ **Backward run**

✓ **Walking on toes**

✓ **Arm circles**


✓ **Hopping on one foot**

✓ **Plank with alternate raising of arms and legs**

✓ **Mountain Climbers**

II. COOL-DOWN (Mayo Clinic, 2014)

Research suggests that the use of static stretches is more appropriate for the cool down. Cooling down after an activity, such as dragon boating, allows for a gradual recovery of heart rate and blood pressure. Cooling down may be most important for competitive athletes, such as marathoners, because it helps regulate blood flow. Cooling down doesn't appear to help reduce muscle stiffness and soreness after exercise, but more research is needed.



The following are examples of general static stretching exercises that could form part of the cool down program at the end of a training session when stretches are held for 10 seconds or to improve the mobility and range of movement when stretches are held for 30 seconds. In all exercises, breathe easily while performing them (Mac, 2014).

Chest Stretch

Stand tall, feet slightly wider than shoulder-width apart, knees slightly bent. Hold your arms out to the side parallel with the ground and the palms of the hand facing forward. Stretch the arms back as far as possible. You should feel the stretch across your chest.



Biceps Stretch

Stand tall, feet slightly wider than shoulder-width apart, knees slightly bent. Hold your arms out parallel with the ground and the palms of the hands facing forward. Rotate the hands so the palms face to the rear. Stretch the arms back as far as possible. You should feel the stretch across your chest and in the biceps.



Upper Back Stretch

Stand tall, feet slightly wider than shoulder-width apart, knees slightly bent. Interlock your fingers and push your hands as far away from your chest possible, allowing your upper back to relax. You should feel the stretch between your shoulder blades.



Shoulder Stretch

Stand tall, feet slightly wider than shoulder-width apart, knees slightly bent. Place your right arm, parallel with the ground across the front of your chest. Bend the left arm up and use the left forearm to ease the right arm closer to your chest. You will feel the stretch in the shoulder. Repeat with the other arm.



Shoulders and Triceps Stretch

Stand tall, feet slightly wider than shoulder-width apart, knees slightly bent. Place both hands above your head and then slide both of your hands down the middle of your spine. You will feel the stretch in the shoulders and the triceps.



Sidebends

Stand tall, feet slightly wider than shoulder-width apart, knees slightly bent, hands resting on the the hips. Bend slowly to one side. Come back to the vertical position and then bend to the other side. Do not lean forward or backwards.



Hamstrings Stretch

Sit on the ground with both legs straight out in front of you. Bend the left leg and place the sole of the left foot alongside the knee of the right leg. Allow the left leg to lie relaxed on the ground. Bend forward keeping the back straight. You will feel the stretch in the hamstring of the right leg. Repeat with the other leg.



Calf Stretch

Stand tall with one leg in front of the other, hands flat and at shoulder height again. Ease your back leg further away from the paddle, keeping it straight and press the heel firmly into the floor. Keep your hips facing the paddle, and the rear leg. Repeat with the other leg.



Hip and Thigh Stretch

Stand tall with your feet approximately two - shoulder widths apart. Turn the feet and face to the right. Bend the right leg so that the right thigh is parallel with the ground and the right lower leg is vertical. Gradually lower the body. Keep your back straight and use the arms to balance. You will feel the stretch along the front of the left thigh and along the hamstrings of the right leg. Repeat by turning and facing to the left.



Adductor Stretch

Stand tall with your feet approximately two-shoulder widths apart. Bend the right leg and lower the body. Keep your back straight and use the arms to balance. You will feel the stretch in the left leg adductor. Repeat with the left leg.



Groin Stretch

Sit with tall posture. Ease both of your feet up towards your body and place the soles of your feet together, allowing your knees to come up and out to the side. Resting your hands on your lower legs or ankles and ease both knees towards the ground. You will feel the stretch along the inside of your thighs and groin.



Front of Trunk Stretch

Lie face down on the floor, fully outstretched. Bring your hands to the side and ease your chest off the floor, keeping your hips firmly pressed in the ground. You will feel the stretch in the front of the trunk.



Iliotibial Band Stretch

Sitting tall with legs stretched out in front of you. Bend the right knee and place the right foot on the ground to the left side of the left knee. Turn your shoulders so that you are facing to the right. Using your left arm on the floor for support. You will feel the stretch along the length of the spine and in the muscles around the right hip.



Quadriceps Stretch

Lie face down on the floor. Press your hips firmly into the floor and bring your right foot up towards your buttocks. Take hold of the right ankle with the right hand and ease the foot closer to you buttocks. Repeat with the left leg. You will feel the stretch along the front of the thigh.



III. Strength Training (Wolf, 2014)

According to a study published in the January 2013 issue of the "Journal of Strength and Conditioning Research," a specialized upper body workout is the key to improving performance during dragon boat racing. This study concluded that strength-training programs should be developed targeting development of upper-body musculature because these factor is the strongest predictors of 200-meter and 500-meter race performance (Ho, Smith, Chapman, Sinclair, & Funato, 2013). Include in your own workout routine exercises to develop your back, shoulders, chest and arms as a means of super charging each phase of your dragon boat stroke.


Back Muscles

The muscles in your back -- the erector spinae and rhomboids -- play a role in the pull phase of your dragon boat stroke, so incorporate exercises to strengthen these muscles. A good upper body workout for dragon boat racing might include the *one arm dumbbell row*, the *bench row*, *wide grip front pull-downs*, *one arm cable rows*, *straight arm pull-downs* and *close grip chin-ups*. Strong muscles in your upper back will allow you to move a maximum amount of water during the pull phase of your stroke.

Shoulder Muscles

You need to grab as much water as possible with the blade of your dragon boat paddle during the catch phase of your stroke, and strong shoulders help you accomplish that. A good upper body workout for dragon boat racing targets the shoulder muscles -- the trapezius, as well as the anterior, middle and posterior deltoids -- with exercises such as the *dumbbell overhead press, upright row, bent over lateral dumbbell raise, upright shrug and dumbbell shrug.*

Chest

 An open chest position provides good form for your dragon boat stroke at the catch position.

Strong chest muscles, particularly the pectoralis major, allow you to properly execute the catch.

Include the *flat dumbbell fly*, the *flat dumbbell press* and the *incline dumbbell press* in your upper body workout to improve dragon boat racing performance.

Arms

Your arms do not do a great deal of work during the dragon boat stroke, but your biceps and triceps are primarily involved in the catch phase.

Strengthen these upper body muscles for best performance during dragon boat racing. A good workout for these muscles may include the *alternating standing dumbbell curl, dumbbell kickback, preacher curl, reverse curl, cable press down, overhead dumbbell extension and dumbbell curl.*

Active Rest

- ✓ Make sure you spend at least 30 minutes to 1 hour of Active Rest when you are not training in the gym, or with the dragon boat team. You can do running, jogging, road/mountain biking, HIIT (High Intensity Interval Training), or any activities that help improve your endurance and performance in dragon boating.
- ✓ Refer to www.bodybuilding.com for strength training exercises.

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