

# Padding:

Some teams who emphasize stroke rate might put their strongest members in the front to set the stroke rate for the team. Some others who emphasize the mechanical science of propulsion put their strongest members in the back to deal with water resistance. There are also those who theorize on the center of gravity of the boat and the best lineup to lower that center of gravity. Whatever the lineup, there is a rationale for it. Yet, **basic execution, including flawless strokes and synchrony, is the most important part of competitive dragon boating.** No amount of alignment experimentation will help the team if its members fail on the basics.

There are four basic phases of paddling:

1. **"Catch"** as you lean forward, turn your body slightly toward your partner and submerge your paddle in the water. Make sure that the full blade catches water.
2. **"Pull"** as you lean back to pull water. Propulsion of the boat is based on countering that water resistance you feel. Therefore, the boat experiences maximum propulsion as the full blades of all 20 paddlers catch and pull water at the same time.
3. **"Finish"** as you pull the blade out of the water. This phase signals the completion of your first stroke and preparation for your next stroke.
4. **"Reach"** as you lean forward again to prepare for the "Catch" phase of your next stroke.

The "finish" and "reach" phases are sometimes known as "ready-and-reach". Together, they are also addressed as the "recovery" phase.

In the "catch" phase, how far forward should you lean and how much body turning should you have? Ideally, [this far and this much](#) - click to see the graphic on Burnwater.com. If you are a beginner, imagine doing that again and again until you finish a race course of 500m or longer. Don't freak out, as the saying goes: "practice makes perfect." Perfect execution requires physical conditioning outside of dragon boating. In the "catch" phase, your abdominals and shoulders matter most. Regular crunches and shoulder lifts using dumbbells will condition these body parts. Check out the [fitness conditioning guide](#) on this website.

## Practicing Reach:

It is a good idea to **sit in front of someone taller than you** as you train on water. Why? Your taller teammate behind you naturally has a longer reach than you do, thus forcing you to lean forward more. Be careful - do this only if you have sufficiently conditioned your abs and back muscles. Otherwise, you will likely suffer endless swearing from behind.

## Resistance Training:

Sitting in the back of the boat will give you more effective resistance training overall. Why? You are eating the wakes created by everyone in front of you.

If you are sitting in the front, a good way to practice resistance is asking your teammates behind you to create drag by putting their paddles in water but not paddling. This will require coordination by your coach.

## Training on One Side vs. Switching Sides:

Some dragon boat teams finish a practice round without allowing paddlers to switch sides or some dragon boaters prefer to train only on their stronger side. Prolonged training on only one side of your body is not healthy for your spine, posture and overall balance. A healthier way of training is switching sides midway through the round, one row at a time. The drawback, of course, is slowing down during the switching. Another method is keeping track of which side you paddle each week and making sure that you switch every week. Finally, if you really prefer to paddle on one side in order to, say, become a "left side expert" for racing, compensate by doing more conditioning exercises for muscles on the other side.

## Sprint Canoe Style [Verticality](#) vs. Outrigger Style [Tilting](#):

Keeping your paddle vertical against the side of the dragon boat (aka. the "gunno") enhances the speed of the "recovery" phase and hence, the stroke rate. Verticality also makes full submersion of the blades easier and thus enhance the propulsion of the boat. However, the biggest drawback of keep the paddle vertical is its impact on your shoulders as your

stroke, particularly if you stroke fast. If you use this technique, it is crucial to perform shoulder conditioning exercises to build up your shoulder muscles and protect your shoulder joints. Leaning out of the gunno will make it easier for you to accomplish verticality, however, that will require strong oblique abs as well as switching sides to protect your spine - see above.

If your team's paddling style is tilting the paddles, you might protect your shoulders and spine more but the drawback is a slower "recovery" phase. The outrigger tilting technique is good for people who have weak shoulders from a prior injury. To enhance the "recovery" phase, you will need to reduce the air drag (i.e. air resistance) by turning the paddle so that the blade is horizontal to the water and "slicing" the air as you reach forward. This requires frequent wrist turning, particularly if you stroke fast. If you use this technique, you need to build up your wrist strength to prevent injuries. When you do conditioning exercises, include wrist curls using light weight dumbbells. I find it convenient to incorporate wrist curls in between sets as I do bicep curls.

**Serious dragon boat racers train year round**, even in the coldest winter months. When the icy temperature makes on-water practice prohibitive, some teams have indoor practice sessions using a community swimming pool. Indoor practice equipment includes stand up mirrors and small "poolboats":

### **Conditioning Exercises to Get Ready for Races:**

Have you ever observed heat results posted on bulletin boards at races? There is a consistent pattern: the first heat is when teams post their best times and the final heat is when they post their worst times. This is the natural effect of fatigue. However, this is not the whole story. Observing the race results of two teams in close rivalry sometimes tells a different story: while both teams exhibit gradual decline in speed through several heats, Team A posts faster time than Team B during first two heats but Team B beats Team A in the final race. The reason? Team A runs out of gas more quickly than Team B.

How much endurance and strength you and your teammates have is a key factor determining whether your team can sustain multiple heats and beat a close rival at the right moment - the final race. This is where physical conditioning plays a role in addition to on-water practice.

**The best conditioning exercises are tailored to your team's stroke strategy.** Carefully designed, conditioning exercises not only build your strength and cardiovascular capacity but also simulate the muscle movements, breathing pattern and heart rates during a race.

In the weeks leading to a race, it is important to tailor your exercises to your team's stroke strategy. Common stroke strategies begin with a launch sequence that includes a couple of short strokes (with 3/4 of the normal sweep range), followed by 3 or 4 regular strokes and then by a series of ultra fast, short strokes. After this launch sequence, some common stroke series used in races are:

(A) Incrementing stroke speed every 25-30 seconds;

(B) Alternating slow and fast strokes;

(C) Keeping stroke speed constant but varying the pressure applied to the paddles every 15-20 strokes. For instance, you can alternate 20 regular strokes with 20 high-pressured "power strokes";

(D) A combination of the B and C above.

Many teams also have a "finish" series, which is a series of ultra fast strokes in the last 50-100m.

To simulate breathing pattern and heart rate, try the following:

1. When doing cardiovascular exercises, mentally visualize your team's stroke strategy and alternate your cardio pace or intensity accordingly. If the stroke strategy involves alternating 20 slow strokes and 20 fast strokes, do the same with your cardio training. For instance, if you are riding a stationary bike, ride at a normal pace while counting to 20, then bring up the speed and count to 20, then bring the speed back down and count to 20... If your team's usual race time is 2:30 minutes, alternate the slow and fast paces for 2:30 minutes. After that, go into a brief "rest" mode for no more than a minute. The "rest" mode means riding at an easy pace such that you don't feel that your muscles are working. If you are running instead of biking, the rest mode can be walking or slow

jogging. NO STOPPING! After the brief rest mode, begin alternating slow and fast paces again. If you are preparing for a race that has four heats, perform the sequence at least four times consecutively. Keep in mind that this drill involves visualizing your dragon boat strokes the whole time. Do NOT perform the drill if you are running or biking on streets where you have to constantly look out for other people and for traffic.

2. When conditioning with weights, configure the number of sets and number of repetitions per set according to the number of strokes in your paddling series. For example, if your stroke strategy calls for two series of 20 power strokes, set your weight training exercises to 20 repetitions per set and perform two sets per exercise. If you find it difficult to complete the same number of repetitions as you have for paddling strokes, you are lifting inappropriate weight - try lowering the weight. On the other hand, if you are not feeling any resistance while lifting or, after completing the repetitions and sets, you are not sweating even a little bit, your weights are too light - try incrementing the weight