

To sum up, the things that will make you a better swimmer are these:

1. Streamlining the body is necessary for efficient swimming.
2. Rhythm and co-ordination, not strength are the most important factors.
3. Study the styles of the various outstanding swimmers and try to learn by watching these great swimmers.
4. Train faithfully. Lead a clean, well-regulated life.
5. Always be a good sport.

This is one of a series of booklets by champions on the fine points of sports. Be sure to collect the entire series, and for more fine points, follow your **76 Sports Club** on ABC television.

Olympic Swimming Coach

# Mike Peppe



presents **FINE**  
**POINTS**  
**OF**  
**SWIMMING**



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**S**plash!

To me, the prettiest sight in sports is watching a group of trained swimmers hit the water simultaneously and then churn up and down the pool in a grueling test of individual speed, stamina, and co-ordination.

My name is Mike Peppe. I'm swimming coach at Ohio State University, and it has been my good fortune to have coached several Olympic champions and other outstanding swimmers. I'm going to give you some pointers on improving your own style.

Swimming is one activity in which your physical makeup is not too important. In football, the little man doesn't have much of a chance unless he is completely outstanding in one or more departments of the game. The same holds true in basketball, where the good big man grabs the rebounds and dumps in the baskets. In the water, however, all men are equal. The record books are dotted with marks established by swimmers of all shapes and sizes.

You may never become a champion, but by practicing the right things and sticking to them you can be an above-average swimmer and leave the aimless paddlers far behind. Good swimming comes from a combination of three things: arms, legs, and breathing. Okay, in we go!

## Free Style (Crawl)

The most widely accepted method of competitive free style swimming is the six-beat, or American, crawl. This style makes it possible to move through the water faster and easier than any other way, but it calls for perfect timing of arm and leg action.

When the right arm is completing a motion, the left is dropping into the water ready to start. Your body should be stretched out in a comfortable position as nearly straight as possible. First, thrust the arm straight out from the shoulder, with fingers together and slightly cupped. (Fig. 1) Drop the hand and forearm into the water about five inches before starting the pull that will send you through the water. Press against the water gradually with hand and forearm, then pull strongly with bent forearm as the body rides over the arm pull. Relax the arm as it moves back to the thigh, then recover the arm over the water. The arms provide most of your forward movement and are very important in developing speed.

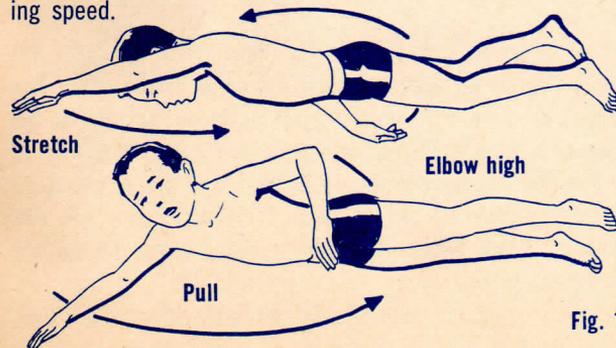


Fig. 1

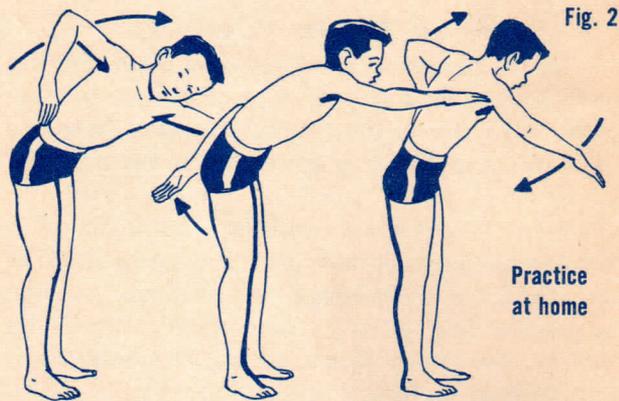


Fig. 2

You don't need a place to swim to develop good arm action. You can do it right at home in your bedroom. Watching yourself in a mirror, bend at the hips until your trunk is parallel with the floor, and start to practice. (Fig. 2) You'll be surprised at the difference ten minutes a day of this practice will make when you really put it into operation in the water.

The six-beat crawl gets its name from the fact that there are six leg kicks to each full cycle of the arms. The kick is an alternating up and down movement starting at the hips and going down through the knees and ankles. (Fig. 3) If you can develop a looseness in your kick, you will have an advantage. Don't kick too deep or it will throw you off-balance. About twelve to eighteen inches below the surface is a good kicking scope for the average boy.

Practicing the kick is a bit difficult out of the water,

but when you're in the pool, perfect it by hanging onto the side of the pool, with your body lying out flat, and churning the water behind you.

I have already told you that breathing is important to the swimmer. It must be done so as not to interfere with the rhythm of the stroke. You must learn to inhale deeply and quickly through the mouth after turning the head, **not** lifting it from the water. Exhaling under water should take about six times as long as inhaling. You can practice correct breathing in a large dishpan or tub. (Fig. 4)

### Breast Stroke

The breast stroke is a form of swimming in which the arms and legs, working together smoothly, produce speed. The arms work in unison first, and then the legs.

Begin the stroke with arms fully extended forward, thumbs together, and palms flat on the surface of the water. (Fig. 5) Pull the arms back and slightly downward until they are at right angles to the body. Bend your elbows and drop them quickly to your side, with forearms beneath your body. To complete the stroke, move your hands straight forward to the starting position.

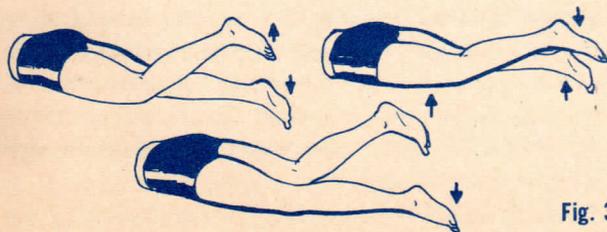


Fig. 3

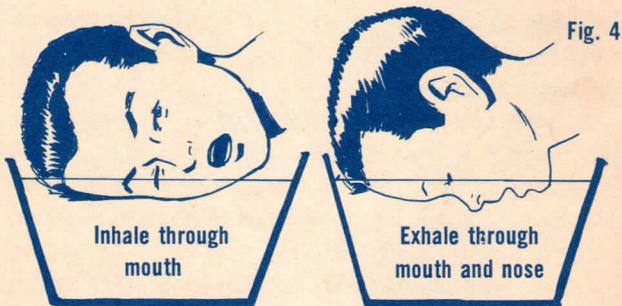


Fig. 4

The kick starts with legs together and fully extended. Bend your knees and bring your heels up toward your body. The movement starts at the time you've finished your arm pull. Then, with toes turned out, push backward and downward with the legs as you spread them apart. When legs are fully extended, bring them together with a snap. This combination thrusting and squeezing action of the legs is important to provide the necessary propulsion for this type of swimming.

If your back is straight, the snap of the legs will help shoot you forward. Co-ordinating arm and leg movements is simple if you remember to have the arms fully extended and together at the time your legs are in the same position. Here's a way to get in valuable practice at home: stand on one foot, supporting yourself with your hand against a wall. (Fig. 6) Go through the stroke with one arm and one leg to make certain they are co-ordinated. Then do the same with the other arm and leg.

In this stroke, you submerge the face for exhaling and

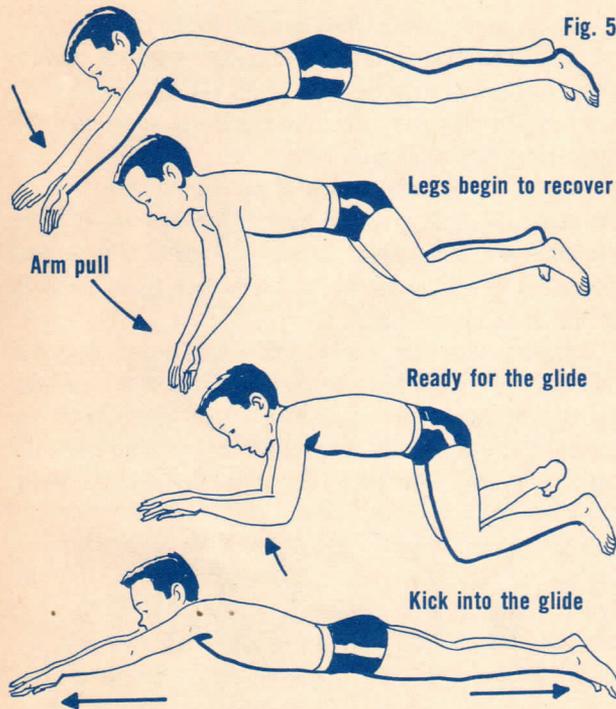


Fig. 5

raise it for the intake. Breathe in at the same time you make the pull with your arms and lift the body forward and up. Exhale as the arms are returned to the starting position.

## Butterfly

A variation of the breast stroke is the butterfly stroke. (Fig. 7) It is a double overarm stroke, in which the arms pull down and back in the water at the same time. The fishtail

or dolphin kick is almost always used in the butterfly.

This leg action is an alternating downward and upward thrust of the leg with the knee bent. The movement originates in the hips and, when done properly, looks like the motion of a fish moving its tail.

There are two movements of the legs to one cycle of the arms. The first, or major, beat of the legs occurs while the arms are being pulled through the water. The second movement, called the minor beat, takes place during recovery of the arms over the water.

Practice the fishtail kick with a kick board. Keep the feet together as you push forward by means of the undulating up and down movements of the legs. When doing the complete stroke, try to settle into a steady pattern of pulling and kicking, with eyes held at the level of the water

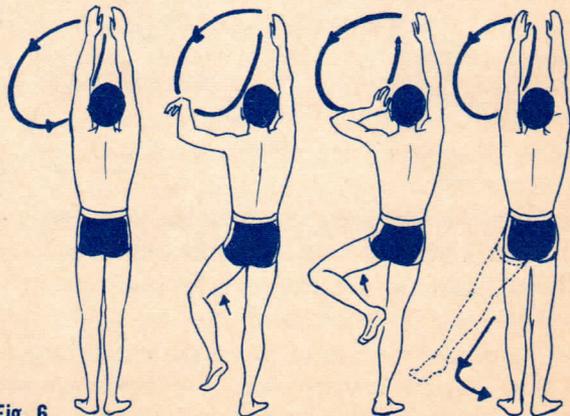


Fig. 6

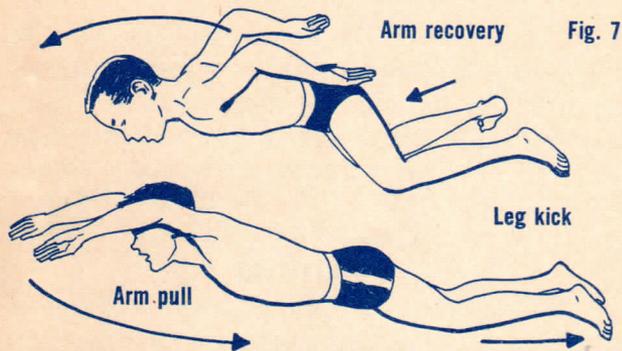


Fig. 7

surface, and inhaling with every other arm pull, exhaling as the face is held under water.

## Backstroke

The backstroke in competitive swimming is simply the inverted six-beat crawl stroke. (Fig. 8) The body should remain in a comfortable floating position, and the arms and legs should keep pulling and kicking. The head is carried out of the water, chin toward the chest, eyes looking forward.

Catch the water with the hand beyond and to the side of the head. Press downward and sideward with the hand and forearm and give all the pressure you can after the midway portion of the pull is reached. Do not pull too deeply.

Start the recovery as the arm approaches the sides of the body. Keep the palm of the hand turned toward the surface of the water so as to allow it to fall naturally into the catch again.

Emphasize the upbeat of the alternating up and down movement of the legs. This is a deep kicking movement

originating at the hips, with plenty of knee bend. Keep the toes pointed. Do not permit the knees to break the surface.

Remember this about all swimming strokes: speed swimming is a problem of overcoming the resistance of the water. Any movement of the body which tends to increase this resistance, such as dropping the shoulders, rolling, or swaying at the hips, will cut down efficiency.

## Turning

Swimming meets are usually held in pools 25 yards or less in length, so developing a quick, powerful turn is most important. Good swimmers can travel 100 yards faster in a closed course with turns than in a straight one.

There are three types of turns, called open, spin, and tumble turns. In breast or butterfly, the open or spin turns

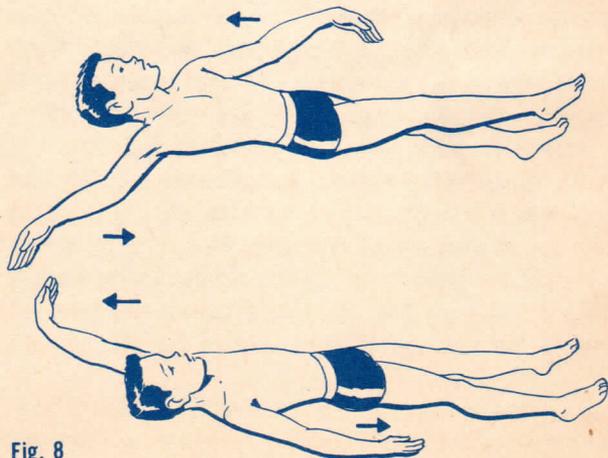
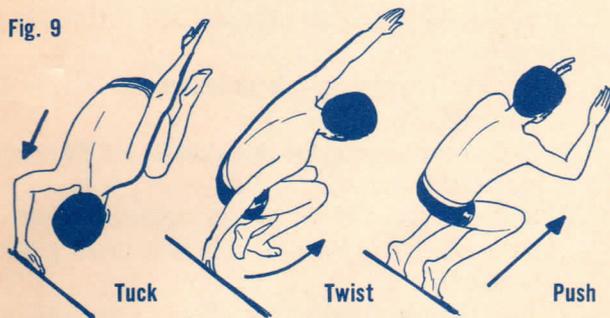


Fig. 8

Fig. 9



are most often used, because the swimmer must touch with both hands and may turn in either direction.

In free style, always turn in the opposite direction from the hand that makes the last stroke going into the wall. In backstroke, turn toward the hand that touches the wall. In open turns, the breath is taken as the body turns with the head out of the water. The feet, with knees bent, are drawn in to the upper part of the body and placed against the wall for a vigorous push-off. (Fig. 9) In spin turns, the breath is taken before going into the turn, the knees are drawn up into a compact tuck as the head turns below the surface and spins the body around ready for the push-off. The tumble is done with a dive and half-somersault. This dive and somersaulting whips legs and feet over the water and into the wall in a rapid manner and allows the swimmer to make a much faster turn. The most important part of any turn is the push-off and glide, which must be forceful and should carry the swimmer at least five yards beyond the point of turning.