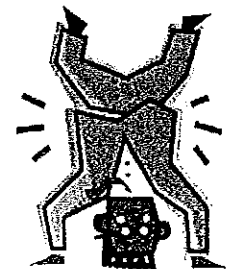


Cardinal Rules of Practice

Listed below are what the coaches feel are vital to the success of our team. Work on these skills during practice to learn the correct techniques of stroke work. Pick one to work on until you have it mastered it, then move on to another. By beginning at the start of the season, you will have the time to perfect them.

1. **Be on time** – Practices are planned out in advance to get the most done in the time we have. Missing what we discuss before we get in the water, the warm-up, explaining what we want to accomplish in the practice, etc are important to our success and done with a purpose. It is rude and inconsiderate for you to think that you are so important that you don't need it.
2. **Stretch** – Do this before and after practice to prepare your body for the exertion you are going to place on it, prevent injuries and to help avoid stiffness and aches from day to day.
3. **Streamline** – Be in the streamlined position for at least 5 yards off the turn to conserve energy while maintaining the most efficient swimming position supplemented with dolphin kicks.
4. **Alternate breathing** – When doing freestyle use either a 3-3 or 3-2 breathing pattern to balance out your stroke, increase your endurance, allow you to watch competitors on both sides when racing and to help prevent shoulder injuries.
5. **Train your mind and body in practice** – During a race, you don't think about what you are doing. Thinking during a race will slow you down. If you practice illegal, sloppy or slow turns, starts and strokes in practice – they will come back to haunt you in a race.
6. **Long & Short Axis (hip action)** – Freestyle and backstroke are the **long axis** strokes. When swimming these strokes the hips rotate from side to side with the body staying straight. Butterfly and breaststroke are the **short axis** strokes. These strokes require the hips to in an up and down motion which allow a whipping action from the legs.
7. **Finish the stroke** (completely and quickly) – In the free, back and fly the first part of the pull is setting up the arms for the power phase of the stroke. After the catch, you begin to propel the body forward by applying pressure against the water as long as possible increasing the power and speed of the stroke until the hand(s) exit the water.
8. **Know your times** – During each set, establish a time you want to do for each repeat. Keep each one about the same speed, maybe decreasing your time near the end of the set. There will be times I will want your average for a test set. You will learn how to this early in the season and is very beneficial.
9. **Attack the turns** – Turns are where a lot of swimmers and your competition will think about stopping during a set and grapping some extra air during a race. The faster you go into the turn, the faster you will be able to get your feet on and off the wall.
10. **Point the top of the head** - Keep the top of your head pointed at the wall you are swimming towards to always move forward. Keeping the head down will maintain a balanced, level body, during the race and reduce drag.



The Target Zone

My age is _____

My **MAXIMUM TARGET HEART** rate is:

$$220 - \text{Age} = \underline{\hspace{2cm}}$$

My **RESTING HEART RATE** is _____

Formula: _____ **MAXIMUM TARGET HEART RATE**

(Subtract) _____ **RESTING HEART RATE**

_____ **Answer (A)**

Multiply Answer (A) by .6 and .8 to determine your minimum and maximum working heart rate.

Answer (A) _____ X 0.6 = _____ **Answer (B)**

Answer (A) _____ X 0.8 = _____ **Answer (C)**

Add your **RESTING HEART RATE** to Answers (B) and (C)

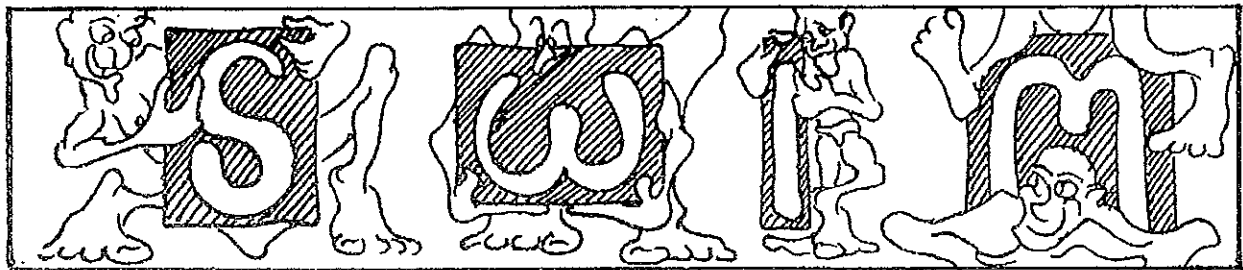
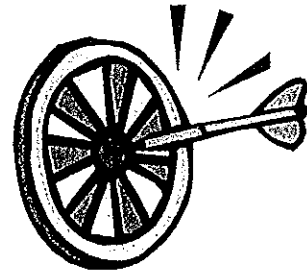
Answer (B) + **RESTING H. R.** = **MINIMUM WORKING H. R.**

_____ + _____ = _____

Answer (C) + **RESTING H. R.** = **MAXIMUM WORKING H. R.**

_____ + _____ = _____

The best indicators of good cardiovascular fitness are your resting heart rate and our recovery heart rate. Re-evaluate your resting heart rate every 8 weeks.



The Three Phases of the Season

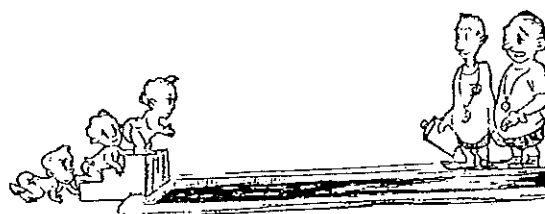
“Stroke and Turn Phase”



We spend the first four weeks of the season working on dry land conditioning, starts, turns, and strokes. The practice sessions will include work on stroke technique, exercises, running, diet and nutrition and video taping of your strokes.

Stroke work will continue throughout the season, but the bulk of our teaching the starts, turns and strokes will occur at this time. We will not be concerned with the amount of yardage we are doing, but we will be concerned with doing our starts, turns, and strokes correctly. After we have taught you the basics of each stroke and everyone has had a chance to practice them, we will have “time trials.” Everyone will get a time for each of the strokes.

We will be training everyone in all four strokes gearing you towards a good individual medley. Therefore it is very important for you to attend every practice, pay attention and strive to become efficient in all of the strokes. The more strokes you can do well, the more valuable you will be to our team and more chances you will have to swim. Too often, high school swimmers limit themselves to one or maybe two strokes; don't let this happen to you.



“We like to start them young, Coach, but really...”

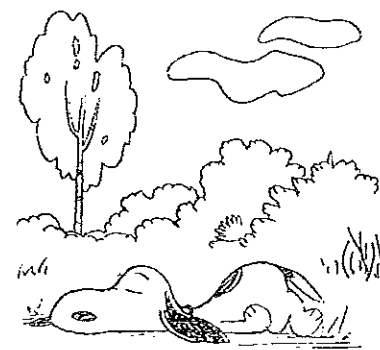
We will also be setting goals during this time. Those who are new to the team will have their goals set after the season has started and you have experienced a few meets.

“The Key is Consistency”

“The Work Phase”

The following three months will be spent building up yardage and aerobic capacity. During this time of the season you will be doing most of your practices in building up your endurance. We will be trying to build up your stamina to swim fast for all of your events; many of you will be swimming as many as four events during a meet.

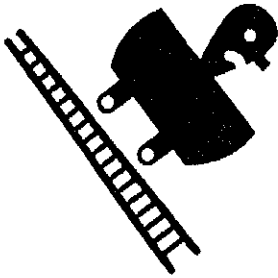
All of your sets and swims should be done in what we term build up sets. Build up sets are where second half of the set is as fast as or faster than the first set. Too often swimmers begin a set very strong and fade to the point where they can hardly finish the set. **Remember: the way that you train is the way that you will swim your race.** Most races are won by the person who can finish the strongest. Negative-splitting is where you divide up each swim in a set and swim the second half as fast as or faster than the first half. For example: 100 Free during practice, 1st 50 - :33.0, 2nd 50 - 32.5. This type of training will enhance your ability to finish your races strong, achieve PR's and beat your competition.



The amount of rest between each swim during the practice will be at a minimum (<:30). The volume of yardage we will be doing will increase and you will be challenged to complete each set.

I compare this part of the season to putting "money" in the bank. The harder you work the more money (conditioning) you deposit. For every workout you work extremely hard you are making deposits in your conditioning account. The **"TOTAL"** program which will include; swim practice, dry land conditioning, relaxation and meditation, good nutrition and good sleep habits will all contribute directly to your conditioning account. These deposits are then able to be drawn out at the Region and State Championships.

"The Taper Phase"



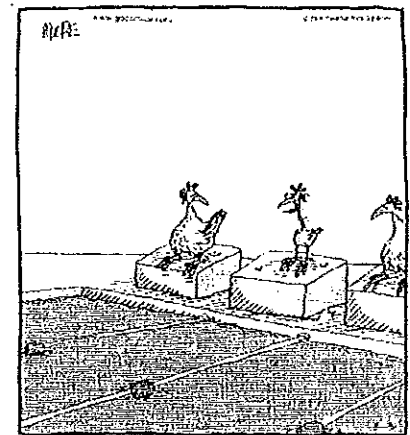
The final 3 – 4 weeks will be the taper phase of our season. The dictionary defines taper as: "gradually becoming smaller toward one end; a gradual decrease of force or capacity." In swimming, taper means a reduction in yardage but increasing the intensity of the swims pointing toward a peak performance. Some of you will taper for the Region XI Championships and others will taper for the State Championships.

The success of our season depends on the success of the taper. Why put yourself through a whole season of work if the taper isn't on target? On the other hand, the taper will not be there for you if you haven't been adding to your "conditioning bank" throughout the season.

The taper will vary with each individual. As coaches, we will try to meet each of your needs according to the races you swim. Each of you must believe in your taper and the goals you have worked so hard for. Once you enter the taper phase; rest is 10% and your mental attitude is 90% of your success. **You must believe in what we are doing and then you must DO IT.**

During the taper, the intensity or quality of your swims will be greater. You must go all out when we ask for an all out swim, anything less will decrease the effect of the taper. We will be doing a lot of broken swims.

The combination of a hard season of training and your willingness to rest at the end yet swim fast when told to will make your success inevitable. Remember that our goal, as coaches, is to help you to achieve times faster than you ever thought possible. We need to work together.



"I plucked myself. It reduces drag in the water."

“Cue” Words

In the following pages, all of the strokes are broken down into small details. The “Cue” words will be used by the coaches during practices to give you a quick reminder of what you need to work on. If you have any questions, please ask one of the coaches for help.

The Fundamentals

“Hand Sandwich” – When entering the water from a start or pushing off the wall after a turn, put one hand on top of the other, your arms straight and pressed against the side of your head just behind the ears.

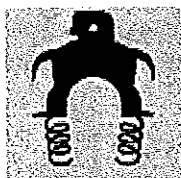


“Stay away from the wall” – The ideal leg position for the push from the wall is the same as for testing your vertical leap. Remember, that if you can start your turn six inches further away from the wall, which will also save you six inches coming out. That will save you a foot of swimming on each turn.

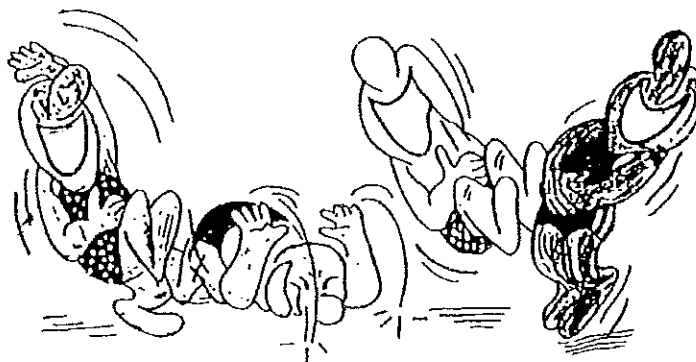
“Drive to the wall” – Start to plan your turns and finishes at the flags. Speed into the turn will translate into a faster turnaround. At the finish of every race come into the wall hard with the top of the head pointed at the pad, stretch, and touch the pad below the water level with the fingers fully extended.



“Answer the phone” – During the turns involving the breaststroke and butterfly. Bring the last hand off the wall past your ear similar to putting the phone to your ear. Remember: the shortest distance between two points is a straight line.



“Bounce off the wall” – During turns the change in direction begins the instant you contact the wall, whether you make contact with your hands or feet. Get them off the wall as fast as you can.



20 X 500 on the what?

Freestyle

“Bites of air” – Quick bites of air are what you want when swimming. Breathe as though you are trying to sneak a breath. You want to maintain the same speed of your stroke when you take a breath.

“Follow through” – The power in freestyle and butterfly comes during the final half of the stroke as the hand pushes the water back towards the leg. Stick your thumb out and brush it against your leg to insure your following through with your pull.



“Alternate breathing” – Using a 3-3 or 3-2 breathing pattern accomplishes:

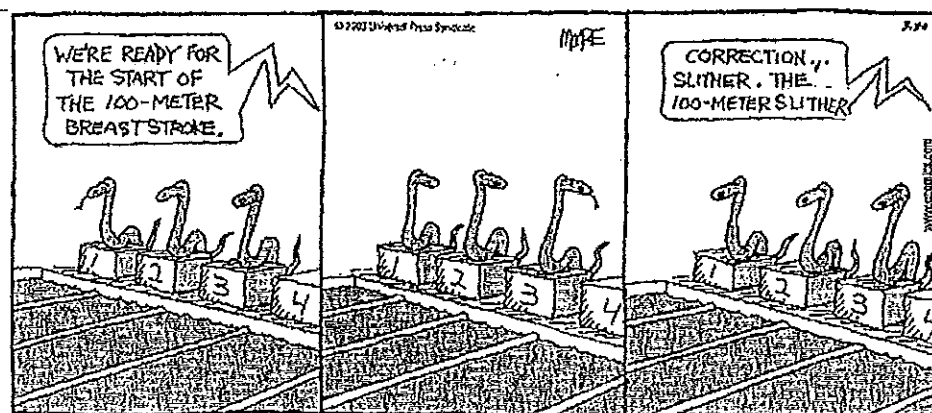
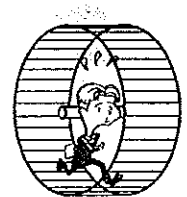
1. It will balance out your stroke by insuring that your body rolls to both sides.
2. It will allow you to see swimmers on both sides when you are racing.
3. It will let you adjust your breathing going into a turn.
4. It helps prevent shoulder problems from swimming.
5. It is tougher on your body in practice, making you work the cardiovascular system harder

“Pull with the bottom arm first” – The first arm pull during the turn is started during the roll to the stomach. It should pull you onto your stomach and help bring you to the surface while maintaining the speed you received from pushing off the wall.

“Early Vertical Forearm” – Getting the hand and forearm into the catch as soon as possible will save you a lot of energy by eliminating unnecessary movement from horizontal or ‘flat’ arm entry. It will also allow the recovering arm to more easily exit the water.

“Burn the turn” – Attack every turn. Instead of trying to get a little rest on the turn, accelerate into it. The faster you go into the turn, the faster you will be able to flip, get your feet on the wall and ready for the push off. Swim as fast as you can for the wall until you think you are going to hit your face, then duck!

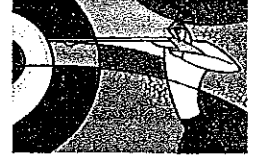
“Kick-pull-pull” – After the start and every turn you want to establish a high rate of turnover. This will set your tempo for the entire length. After you have taken your first flutter kick, begin to pull with the bottom arm, halfway through the first arm pull, begin to pull with the other arm which will “pop” you to the surface. Keep your head level with your face in the water.



Backstroke

The following tips were given to me by John Naber, winner of 3 Gold medals and a Silver at the 1976 Olympic Games in Montreal.

1. **Rifle Barrel** – As your arm exits the water for the recovery, you want to sight straight down the arm over the thumb as you would sight down the barrel of a rifle.



2. **Speedo Panel** – Speedo used to make suits with panels down the side. During the pull, rotate the opposite hip up so the panel breaks the surface of the water. This will give you the desired roll needed for swimming backstroke.



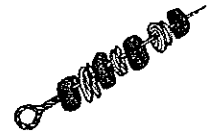
3. **Boil Water** – The kick should make the water look like it is boiling near the toes.

4. **Arm Wrestle** – As the arm reaches shoulder level during the pull, get the arm into the same position you would if you were going to arm wrestle. This position gives you the maximum leverage.



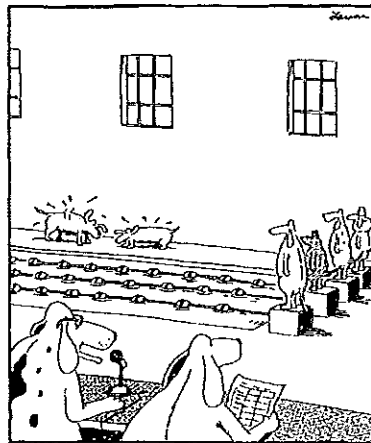
5. **Shot Put** – At the finish of the pull, push the water down with a flip of the wrist as the arm straightens out. The thumb comes out first and the little finger enters first.

6. **Bar-B-Q Skewer** – The body rolls as one piece from side to side with each arm pull while the head remains in a fixed position with the ears in the water.



7. **Streamline** – Stretch off the start and turns, take 6 to 8 short-fast dolphin kicks maintain speed. The further away from the wall you get, the smaller and faster the kicks are. Deep water is very fast.

8. **Turnover** – Keep the arm speed fast on the recovery. You want to get the hand back in the water as soon as possible. For some people, kicking faster will increase the arm speed.

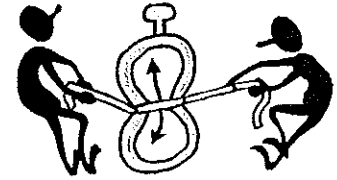


"Well, we're ready for the males' 100-meter freestyle, and I think we can rest assured that most of these athletes will select the dog paddle."

Breaststroke

"Scull Out – Scull In" – Begin the arm pull by sculling out, then turn the hands over and scull in.

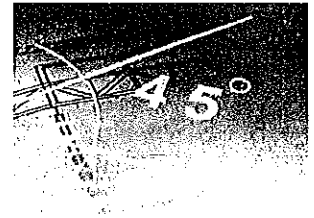
"Squeeze the elbows together" – During the recovery, push the elbows together as the hands shoot forward. This will streamline the body and put it in position for the kick.



"Swim Breaststroke – Think Fly" – This will help you to achieve the wavelike motion of the breaststroke.

"One one-thousand, two one-thousand" – Take full advantage of the speed you get from the start and wall by staying in a streamline position and counting 'one one-thousand, two one-thousand' and then take the underwater pull with the dolphin kick. When you feel the water move past your feet, begin the recovery of the arms keeping them close to the body.

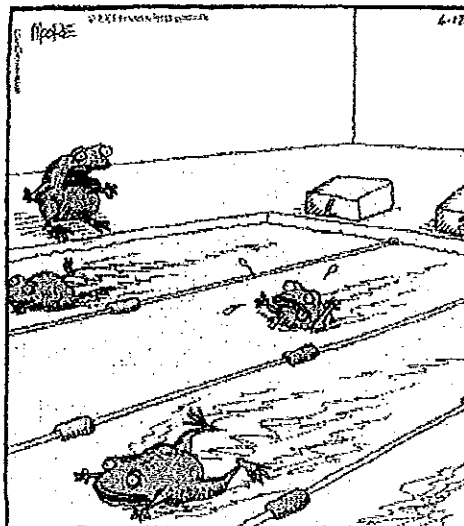
"Fast hands and feet" – Once you begin swimming on the surface, you want the hands and feet to move through their full range of motion as fast as possible.



"Hold the head still" While swimming the breaststroke, hold the head steady while looking down at about a 45° angle.

"Welcome the pain" – Near the end of the race when the legs and lungs are burning, the arms seem to be doing nothing, and your head is throbbing; welcome this feeling. It tells you that you have given the race all you have. *Note: This feeling will not happen when you taper.*

"Stretch on the recovery" – When the arms finish the recovery, lock the elbows, press the arms against the head and look at the bottom. For the split second you do this, you become aware of the toes touching to finish the kick and streamlining.



"Use your back legs, fool! Forget the dog paddle!"

Butterfly

“Hands in – Hips up” – As the hands enter the water on the recovery, push your belly button to your spine to get the water off your back and place the body in a horizontal position for the pull.

“Kick in – Kick out” – Kick as the arms enter and exit the water.

“Pull yourself forward” – Just before starting the pull, rotate the elbows slightly upward to gain the ultimate leverage for power during the pull.

“Breathe early” – Take the breath early in the stroke as the arms pass the chest. You want your head to be going back in the water when your arms exit.

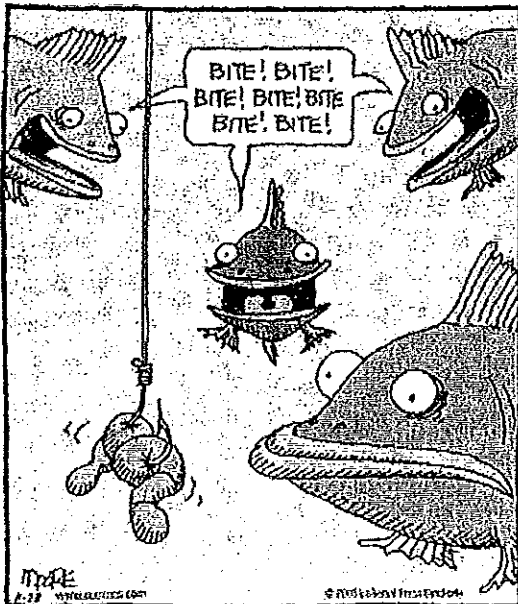
“Hour glass” – The pull pattern for the fly is in the shape of an hour glass or a very shapely girl, finishing as the thumbs brush past the legs.



“Swim long” – Stretch out as the arms enter the water to allow the body to get horizontal with the surface for the arm pull and then finish the pull with the arms fully extended as they are thrown into the recovery.

“Palms up recovery” – As the arms exit the water, try to recover with the palms up. This will lead to a faster recovery and the correct entry position for the hands.

“Throw the arms forward” – During the recovery of the arms, keep them straight and throw them over the water keeping the finger tips near the surface of the water.



Seconds later, Ernie gives in to peer pressure and disappears forever.



Dogs and alcohol: The tragic untold story

Individual Medley

“Float the Fly” – The fly leg is generally the fastest because you have a start from the block, are fresh and have the rhythm. Develop a regular breathing pattern and hip action, it should feel easy.

“Pull the Back” – Just use your legs to maintain body position during the backstroke leg letting the arms do the bulk of the work. This will save the legs for the breaststroke leg.

“Kick the Breast” – Give the arms a little rest for the freestyle while working hard on finishing the kick.

“Sprint the Free” – The final leg is an all out sprint. Work on bringing the freestyle split close to the butterfly split.

“7 chances” – The seven turns used in the I. M. provide you with seven chances to improve your time and gain an advantage over your opponents. Practice all seven every day and take advantage of the wall to shorten each length.

“Best stroke wins” – Use your best or favorite stroke to pull away from the field. Using it to catch up is of no real advantage.

“Rhythm” – Take three to five dolphin kicks off the start and turns (except for the breaststroke) to establish your rhythm before the first arm pull.

