

Thoughts on Walls in Swimming (and related benefits from refining wall based skills)

Questions, comments or feedback: – Feel free to email Coach Allan Kopel – [coachkopie@gmail.com](mailto:coachkopie@gmail.com) - refer to swimming walls or masters swimming in the subject. Have a great, safe, fun and fitness filled journey – in sport & life, in and out of the water.

**Purpose of Walls in Swimming** (besides holding water in a correctly measured pool-☺):

- Reverse direction
  - The word TURN sometimes makes the maneuver seem more involved than it needs to be. We are not literally turning around. We are simply reversing direction – in and out of the wall with a compact, quick, forward or reverse roll (somersault).
- Use the potential propulsion from pushing off a wall to one's advantage.
  - Off a wall (and the start) – if done well, can go faster than top end swimming speed.

**Today's Objectives:**

- Provide information that adds depth and understanding about how you use walls
- Provide positive & constructive feedback on skills and drills
- Provide drills you can take with you for continued practice
- Encourage you to explore and “PLAY” with drills and skills to refine technique
- Raise awareness that skills not used directly in open water swimming can promote ease of movement, better air management and efficient swimming

**Guiding Principles for Today:**

- We are all here to learn (not only from coaches, but from each other too)
  - There is no exact, absolute way to learn or do a particular skill, but you will hear ideas and techniques that have proven successful over time
  - There are no bad questions so feel free to ask and even question what you hear
  - A teacher may not have an exact or immediate answer --- but good teachers and patient learners work and possibly collaborate to find a helpful answer.
  - Learning (creating change in performance) usually takes time. It is incremental and progressive but not always predictable, linear or easy as logic might suggest.
- + Consider the simple tasks: fold hands, cross arms or tie shoe laces. Now try doing each another way (other thumb on top; other arm on top; tie laces another way).
- In sport (life) begin with the end in mind (image), but let the focus be the process; the incremental adjustments and skills you “play with” in the here and now.
- + Example: Practice a mid-pool forward somersault. Mentally stay with that skill rather than wonder about feeling one's legs press backward or body reverse direction. The urge to go to the next step is strong. Play with (focus on) one skill at a time.
- We may be motivated toward an outcome, but manage the process and good results tend to follow. The Process = the now; that which we can directly impact.

Rules may not be glamorous like performance geared thoughts, but are important to know

- **Freestyle:**

A) Referencing the USMS Rule Book (101.5.3): Turns: Upon completion of each length, the swimmer must touch the wall.

- For an “open turn”, swim in and do a one hand touch “short axis” turn.
  - Swim toward wall with eyes down (hold spine line), may peek at low point on end wall by looking through top of goggles; contact wall with lead arm and let momentum carry closer so the elbow can bend; sneak feet and knees compact, directly under and onto wall for foot plant (will practice reverse short axis somersaults); as feet are about to plant, hand that contacts wall comes off to “answer the phone”; stay low and get breath as trail hand “answers phone”; submerge and push off into clean streamline.
- For a forward roll (“flip turn”), swim in – eyes down in proper long axis spine line posture (possibly peek through the top of goggle to sight low on end wall); slightly submerge (it’s subtle); roll straight over compact; plant feet; extend off wall to streamline; rotate to the breast (to prone) into a powerful, clean breakout.
  - Swim in, forward roll and push off (Think tall swim – small roll – tall streamline).
  - Forward Roll: tuck chin (think top of head to navel) bend at waist, feel calves slap

- **Backstroke:**

A) Referencing the USMS Rule Book (101.4.3): Upon completion of each length, some part of the swimmer must touch the wall. During the turn the shoulders may turn past vertical toward the breast, after which a continuous single arm pull or continuous simultaneous double arm pull may be used to initiate the turn. Once the body has left the position on the back, any kick or arm pull must be part of the continuous turning action. The swimmer must have returned to a position on the back upon leaving the wall.

B) Note from the Rule Book: The swimmer who turns past vertical and, in a continuous motion, grabs the wall before pushing off with the feet while on the back is considered to have executed a “continuous turning action”.

- It is a personal choice to perform a backstroke turn as a hand touch and pivot (open turn style) or as a roll to the breast\*\*, freestyle like maneuver. Once you are reasonably comfortable rolling to the breast and doing a forward tumble-type turn, you will find that technique is much faster.

\*\* Note: “To the Breast” here refers to the front (prone); not to the breaststroke.

**“Long Axis” Turns:** Freestyle and Backstroke are come under the category of Long Axis Turns where a fairly straight over, forward tumble (somersault) is performed.

- **Breaststroke:**

A) Referencing the USMS Rule Book (101.2.4): At each turn and at the finish of the race, the touch shall be made with both hands simultaneously at, above or below the water level. The head may be submerged after the last arm pull prior to the touch, provided it breaks the surface of the water at some point during the last complete or incomplete arm cycle preceding the touch.

B) USMS Rule Book (101.2.3): Kick – After the start and after each turn, a single butterfly (dolphin) kick, which must be followed by a breaststroke kick, is permitted *during or at the completion of the first arm pull*. Initiating the arm pull is defined as the hands beginning to move apart. The rest of (101.2.3) describes the standards of a legal breaststroke kick.

- After a legal two hand touch: lead hand comes off the wall (elbow buddy); let forward momentum take you closer to the wall so trail arm elbow can bend for leverage and to get compact to (pivot) tuck and sneak feet and knees to the wall. As the feet plant (typically - lead arm side foot is slightly lower than other foot), trail hand “answers the phone” and meets other hand just beyond the head; get breath then submerge (compact) as the trail hand enters the water; extend from the wall (toward the breast) into streamline.
- Unique to breaststroke: underwater one is allowed an arm pull, a leg kick and (within that – one body dolphin-101.2.3) before emerging for a fast breakout.
- As you read the rule book text for the butterfly turn (next bullet point) you will see that once a legal touch is made, a swimmer may turn in any manner desired – as long as one is toward the breast as one leaves the wall for the next length. That same option applies to breaststroke but for some reason is not written in the book.
- As noted in the Rule Book on Fly turns, on Breaststroke turns, the shoulders must be at or past the vertical toward the breast when the swimmer leaves the wall. In other words, one can not pull one’s self past the vertical to the breast.

- **Butterfly:**

A) Referencing the USMS Rule Book (101.3.4): At each turn the body shall be on the breast. The touch shall be made with both hands, simultaneously at, above or below the water surface. Once a touch has been made, the swimmer may turn in any manner desired. The shoulders must be at or past the vertical toward the breast when the swimmer leaves the wall.

- After a legal touch, short axis fly maneuver is essentially the same as breaststroke. The main differences are the stroking motions to approach and leave the wall.

- **Individual Medley (IM) Turns:**

A) Referencing the USMS Rule Book (1:01.6.3): A) Intermediate turns within each stroke shall conform to the turn rules for that stroke. B) The turns when changing from one stroke to another shall conform to the finish rules for the stroke just completed.

- The back to breast turn may be done as a simple grab of the wall (ledge) and pivot
- As a finish with an open hand touch on the end wall and pivot
- As a finish into a backward flip (uncommon today)
- Or as a cross over turn where one touches with the hand to the opposite side before going past the vertical and then does sort of a forward roll but comes out toward the breast (very fast but the most advanced of the options)

\* Air management and the perceived need for air may influence your choice

\* As with any turn, one can practice these in mid-pool; can also practice the “open turn” maneuvers in clothes that slide on a smooth surface such as a wood floor.

**“Short Axis” Turns:** Butterfly turns, breaststroke turns and the transition turns including fly to back and breast to free are essentially short axis turns, which, as contrasted to long axis turns, are basically reverse somersaults.

### **Some General Thoughts / Philosophy:**

- It is up to each swimmer to decide if mastering walls is a priority
- Open water swimming does not directly involve walls, but:
  - + Gaining experience and easy control (oxymoron perhaps) in various positions and postures in the water can yield greater efficiency of movement.
- The prototypical streamline off walls may not be a high priority but being at ease and balanced in a taper vessel form, promotes more efficient swimming
  - + Goal is to hold form (tone) without feeling tension. Wall practice may help this.
- Being economically, efficient and powerful requires effort yet rhythm (Zen-Like). Find ways to swim fast and powerful with flow; not forced or mechanical.

### **Underwater Dolphin Kicking – “The Fifth Stroke”:**

- A) Some swimmers take advantage of the rule that lets them stay underwater off of the start and each wall for 15 meters before surfacing. The “weapon of choice” is typically dolphin or body dolphin kicking in a long, tapered streamline position.
- B) The 15 meter mark is noted in most pools by a white (contrasting color) marker on the lane lines (there are two marks; the far one is 15 meters from the wall).
- C) It is a personal choice whether to use this skill. It can be powerful. Considerations include: how comfortably we manage our air (can we hold air without feeling excess tension or without paying for it later?). Can we body dolphin well or are we simply doing it because it looks good when others do it? Why do it unless we are effective, especially since we have to hold our breath while under water.
- D) “Play” with body dolphin on front and back and toward the side (see what works)
  - + Remember you must be past the respective vertical off the wall for back or butterfly

### **Common Concepts / Skills:**

- It may be better to think quick and fluid **reverse direction** rather than “TURN”. That may be a matter of semantics but TURN may imply turning around as opposed to going straight into and straight out from the wall.
- Kind of like a ball bouncing into and off of a wall.
- Into the wall, at the wall and out of the wall think: tall – small – tall (I.E. – swim in tall, maneuver small and leave the wall streamline and swim tall again)
- Specific to the wall: small is faster and small is easier to maneuver and spin
- Long axis (free and back) turns are essentially a forward tumble (it is OK to say somersault but tumble may seem simpler; less complicated)
- Short axis (fly, breast, fly to back, breast to free) are essentially a reverse tumble (again, reverse somersault would be an OK term)
- “Open Free-style Turns” are essentially short axis maneuvers
- “Turns” take place in and mostly under water and at a fairly shallow depth

## Ways to Practice:

- Away from the wall (sculling in place or swimming toward mid-pool)
- + Forward roll; reverse roll – with and without lead up hand hits
- + Play with turning before the end wall (crisp turn without the leverage of the wall)
- Vertical Underwater: To and away from a mid-depth pool bottom
- + Sensory feedback from the surrounding water going to, at and from pool bottom
- From ready position (the position we start most repeats from at the end wall)
- Into wall to foot plant (like pace swims to a foot finish – to a compact plant)
- Underwater into the wall (submerge at flags – “Tennessee Turn Drill”)
- Through wall to streamline and through breakout (normal practice in and out)
- On wall scull overhead while underwater to balance in athletic plant position
- Practice forward roll on soft land surface (plant hands on ground to protect neck)
- On land, play with (feel) athletic posture: body weight squat; linebacker ready position (shoulders back, head / neck in line, back flat, feet about shoulder width)
- + Hold line on land: (EG: prone plank, shoulder-bridge, stability ball skills)
- In water toys: noodles; balls; PVC pipes; imaginary hats etc... (other ideas)

## Cues, Tips, Common Mistakes and Small Tricks to Play With:

- Going into the wall, common mistake is picking head up (maintain spine line)
- + Sight “T” on bottom and / or peek through top of goggles at low point on end wall
- Short axis turn mistake = lifting head as hands contact wall
- + Practice managing air exchange so you can get air late in rotation
- + Practice when to **“release the valve”** so you can get breath late in spin
- + Keep head in line to stay small and (reverse) spin faster
- Do not want to slow down or rush into walls. Hold top swim speed into walls.
- Short axis turn mistake: staying open at waist, hips, knees (get small into wall!)
- Short axis turn mistake: literally turning around (stay north-south; not east-west)
- Mistake: “opening the torso” too early at the wall from stretching arms toward the other pool end before planting feet in athletic position underwater on wall.
- \*\*\*\* Think of a Rocket Ship: The energy starts from the base and progressively builds and moves to the end of the Rocket Ship. You are a Rocket Ship, in a compact athletic posture with feet on the wall pushing from the feet and legs and exploding to and through your torso as you reach into a clean, smooth but strong streamline.
- Submerging in head-lead form into wall on long axis turn is subtle but helpful.
- “Head Lead”: We finish a stroke cycle with arms at side then submerge and roll
- Submerging makes spin easier and keeps head down (in line)
- + Common long axis mistake: lift head mid-spin causing arched back and “wild feet”
- Classic “ready position” for repeats is great way to practice compact wall form
- Remember that good posture (head in line) does not let you see forward
- + Practice feeling (not seeing) direction, depth and surface tension
- Smooth finishes (head in line & full extension into and through the wall) on repeats lets you feel flow, feel “the line” and rehearse the “pre”-set-up to a turn.
- Practice “success”. After a game winning shot, LeBron James said he played those scenarios in his mind his whole life. He rehearsed (“played with”) it on the playground and in practice. Practice success! Play with success finishes and turns.