Our Favorite Drills and Workouts

Program Director Bill Voight
Coach T Sorenson
Mission Viejo Nadadores
Balance Sequence

- To assist in establishing good balance---repositioning the center of mass, bringing it closer to the gravitational force line working on the stabilized center of air/rotation---where the body is balanced and the torque forces are reduced or at zero.
Balance Sequence

- Dead-man’s float...assuming a relaxed position in the water that allows the body to take whatever position natural flotation and gravitational forces create.

- Arms and legs hanging down toward the bottom of the pool, hips dropped below the surface, upper back may be at or slightly above the surface.
Swimmers then slowly raise the arms (in front of the center of air/rotation) toward the surface. The head remains stable, basically facing the bottom.

As the arms extend in front of the shoulders and along the surface, the effect of this “lengthening the line” causes the hips and legs to rise toward the surface.

At full extension of the arms, females will be basically in a prone float, males will be close to a prone position, but generally their legs will be at about a 20-40 degree angle to the surface.
All swimmers (but most importantly the males) are then instructed to “create the line,” pulling the body into a more rigid line, pressing the lungs slightly down if necessary and extending and drawing the legs into the horizontal line on the surface.

The swimmers are then commanded to “implode” into a tight streamline position, hold it for a second, then begin kicking approximately 7 or 8 meters, then they can begin swimming.

We do this at the beginning of warm-up, perhaps to start a set of 5 or 6 200s.
Harmonic Waves

To neurally re-enforce the combined effects of the center of air/rotation and the center of mass on the body’s movement through the water. Swimmers manipulate these centers to create enough kinetic energy to move down the pool with no drag or lift forces involved (no paddling or kicking).
Harmonic Waves

- Swimmers assume a prone float position on the surface, arms extended forward from the shoulders, but with palms facing one another, thumbs up.

- The legs are extended backward and the swimmers are instructed not to kick but to simply let the legs follow the flow of the body.

- The swimmers then press gently onto their center of air/lungs while keeping the head stable.
Harmonic Waves

- The press is only a few inches, followed by a release of the hips/lower back at their high point. This creates a “punting” effect and the kinetic energy to move the body forward.

- Swimmers establish a rhythm moving down the pool, pressing the lungs down slightly, releasing the hips/lower back, and body slides forward.

We will do harmonic waves as part of the warm-up, for example, 4 x 300, first & last 25 harmonic waves.
Dolphin Dives

- To perform **athletic movement** through the water manipulating and adapting the **body line** to reduce form drag and **experience** the **flow and resistance** of the water environment at **various velocities**.
Dolphin Dives

- Swimmers leap from the bottom in streamlined position, piking as they reach the top of the arc while maintaining a neutral head position and rigid body line.

- Plunging into the water, they adjust the body line to horizontal, driving forward. This is repeated for at least one length of the pool.

We will do this for various 25s or 50s during the warm-up. Variations include dolphin dives with full flip as they enter the water, or dolphin dives with full flip as they enter the water followed by a sprint to the wall and a turn, matching the tuck at the wall to the tuck at the conclusion of the dolphin dive.
Favorite Sets

Swim 30 x 100 Freestyle on an interval they haven’t yet made, say 1:05 SCY/1:15 LCM. They continue until they miss the base (touch and go is a miss). They then rest until the next send-off arrives and continue the set, completing as many of the 100s as they can until they miss again. Each time they miss the base, they rest until the next send-off and continue the set until all 30 100s are completed.

Once a swimmer can complete all 30 at a particular send-off twice, they are given a faster base.

This is a challenging set, but do-able for most swimmers based on their fastest possible send-off. They all complete the set and have a clear measurement of their relative success...how long did it take them beyond the minimum (how many times did they miss the send-off). Lifted from Steve Freiderang
Favorite Sets

- **LCM:** Swim 4 rounds of: 1 x 100 set-up on 2:00, 3 x 100 on :10 rest for best average, on 5:00, 1 x 400 IM best effort on 6:00...the 100s are IM order by the round.

- They record the total time for the 3 x 100 less the rest, which allows a simple way to compute the best average. They also record the 400s. Fair predictor set for their pace in the 400 IM. Recommended by John Dusseliere.
Favorite Drills

- Vertical Butterfly
- Wall-less Turns
- Three-quarter Catch-up Freestyle
Vertical Butterfly Drill

- Show vertical butterfly video here.
How to Swim Vertical Butterfly

• Must be done in deep water
• Swimmer descends with arms extended overhead
• Swimmer dolphin kicks while pulling
• Arms finish pull as swimmer surfaces
• Arms extend overhead while swimmer is at surface
• Repeat
Variations of Vertical Butterfly

- Use fins
- Vertical fly then lean forward to horizontal fly
Benefits of Vertical Butterfly Drill

- Promotes straight arm, relaxed recovery
- Promotes immediate catch
- Promotes horizontal body position
- Promotes forward momentum
- Helps to develop proper timing of pull and kick
Drawbacks of Vertical Butterfly

• Can promote over extending the finish of the pull
Wall-less Turns

• Show wall-less turn video here.
How to Do Wall-less Turns

- Swim back or free to flags
- Flip at flags
- Dolphin kick in streamline to breakout
- Continue swimming
Variations of Wall-less Turns

- Swim with fins
- Turn at mid-point or other place in pool
- Wall-less turn relays
Benefits of Wall-less Turns

- Emphasizes fast spin
- Promotes effective dolphin kicking off walls
- Emphasizes fast dolphin motion
- Reinforces a head-down turning position
Drawbacks of Wall-less Turns

• I haven’t found any yet.
¾ Catch-up Freestyle

• Show ¾ catch-up freestyle video here.
Benefits of $\frac{3}{4}$ Catch-up Freestyle

- Promotes front quadrant swimming
- Can help develop vertical catch
- Can help develop early catch
Drawbacks of $\frac{3}{4}$ Catch-up Freestyle

- Can lead to flat or under-rotated freestyle
Favorite Sets

- Monster Walls
- Recorded Sets
- Challenge Sets
Monster Walls

• Choose distance, number of reps, and interval for the set
• Choose criteria for turn(s)
• All swimmers must meet the criteria on each turn for the swim to count
• Reps can either be counted as 0 for missed criteria and 1 for made criteria or...
• Counted as 1 for missed criteria and 2 for made criteria.
Recorded Sets

• Choose a set that allows enough rest to record times
• Either record or have swimmers record times for each repeat
• Total times for each repeat
• Print and share with swimmers
Challenge Sets

• Establish a number of reps and a base that will push swimmers to their maximum capacity
• Build down to a few reps at that base
Challenge Set Example One

- 1 x 200 moderate free 2:40
- 3 x 200 fast back 2:50
- 2 x 200 moderate free 2:50
- 2 x 200 fast back 2:40
- 3 x 200 moderate free 3:00
- 1 x 200 fast back 2:30
Challenge Set Example Two

• 4 rounds of...
• 1 x 200 moderate free 3:00
• 4 x 100 fly 1:25
Challenge Set Three

- 4 x 200 free 2:35
- 1 x 50 easy 1:00
- 3 x 200 free 2:30
- 1 x 50 easy 1:00
- 2 x 200 free 2:25
- 1 x 50 easy 1:00
- 1 x 200 free 2:20