

Freestyle presentation BCSSA 2012

Freestyle for advanced swimmers

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Teach

- Often as coaches we can get caught up in the performance of the better swimmers. My philosophy is that you are teachers first, trainers second. Evaluate your performance from what you are doing with the B level swimmer, can you correct, change, and procure their performances to an A level? If you can do that, your A swimmers will be able to pick up the same cues and they are off to the races. Most swimmers come with 'coach correctable' mistakes. We are going to focus on those in this presentation.

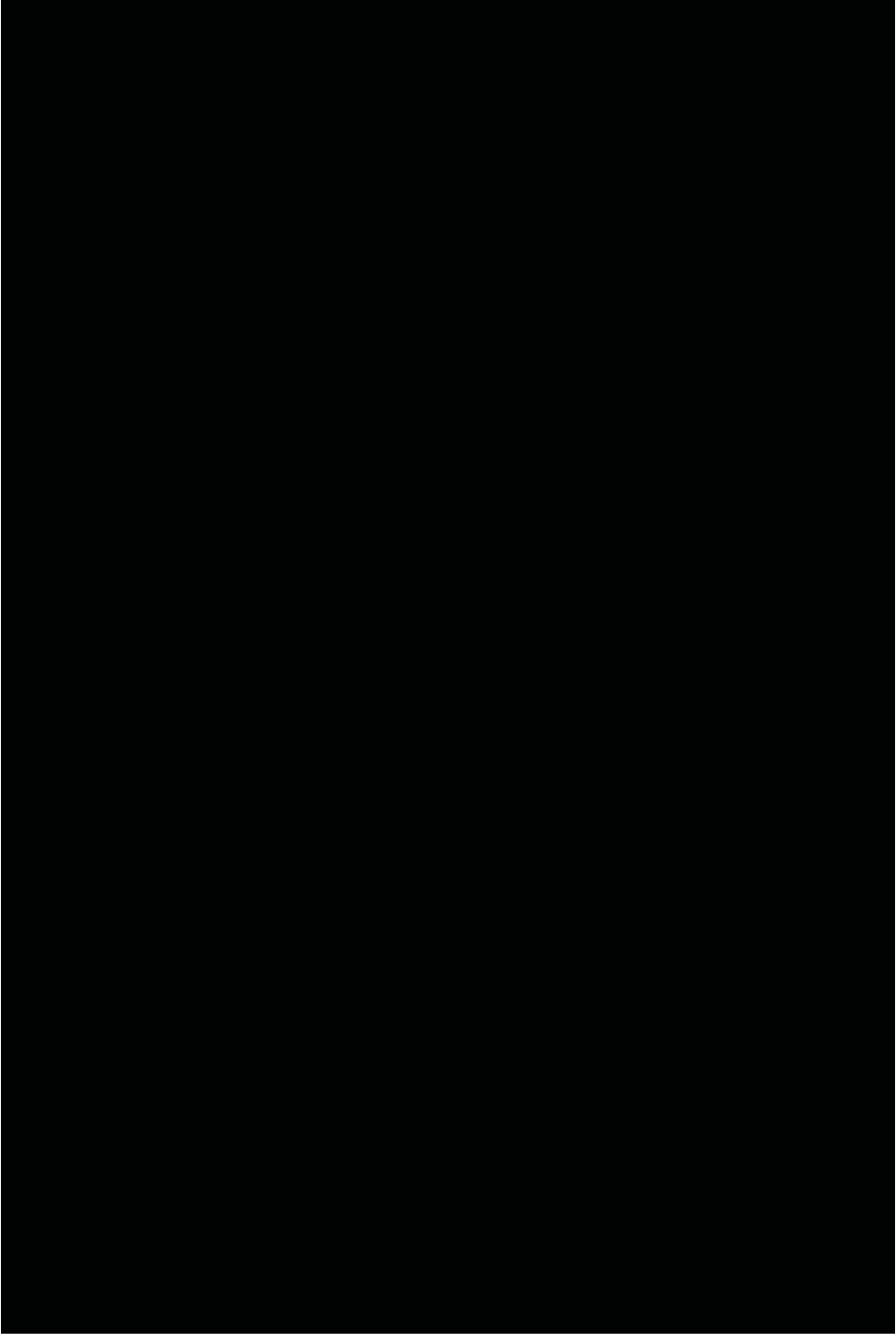
Head position

Fix head position. Especially in the early season, too often the head position is high, and the breath cycle late. In the early season as until the fitness accumulates, you can make big inroads with stroke reliability by keeping focus on head position.

Use of a snorkel fixes head position. However, outside of that you need to insist on eyes in two places, on bottom of the pool, and when breathing, on the side of the pool, no where else.

- Lane conditions often lead to kids watching out for others, so the head creeps up.
- High head position will impede body position and ability to roll, and establish a relaxed high elbow position.

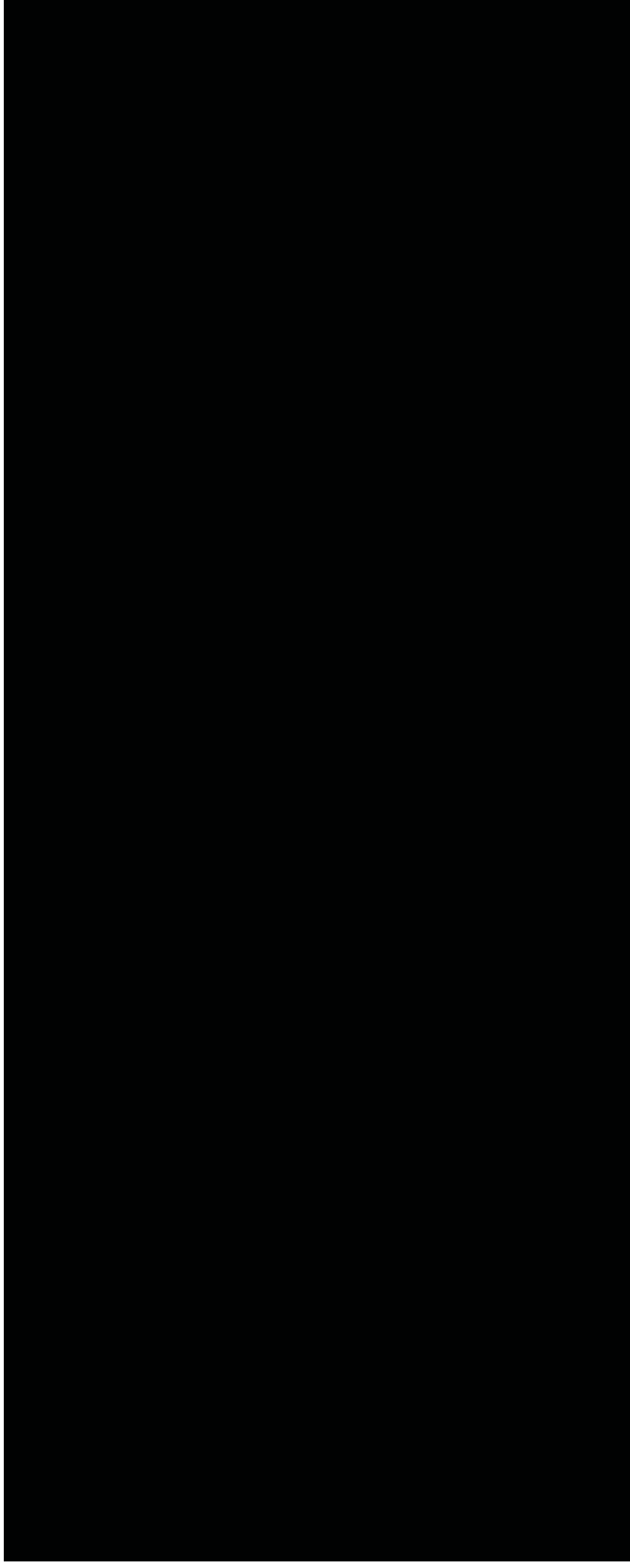
Snorkel



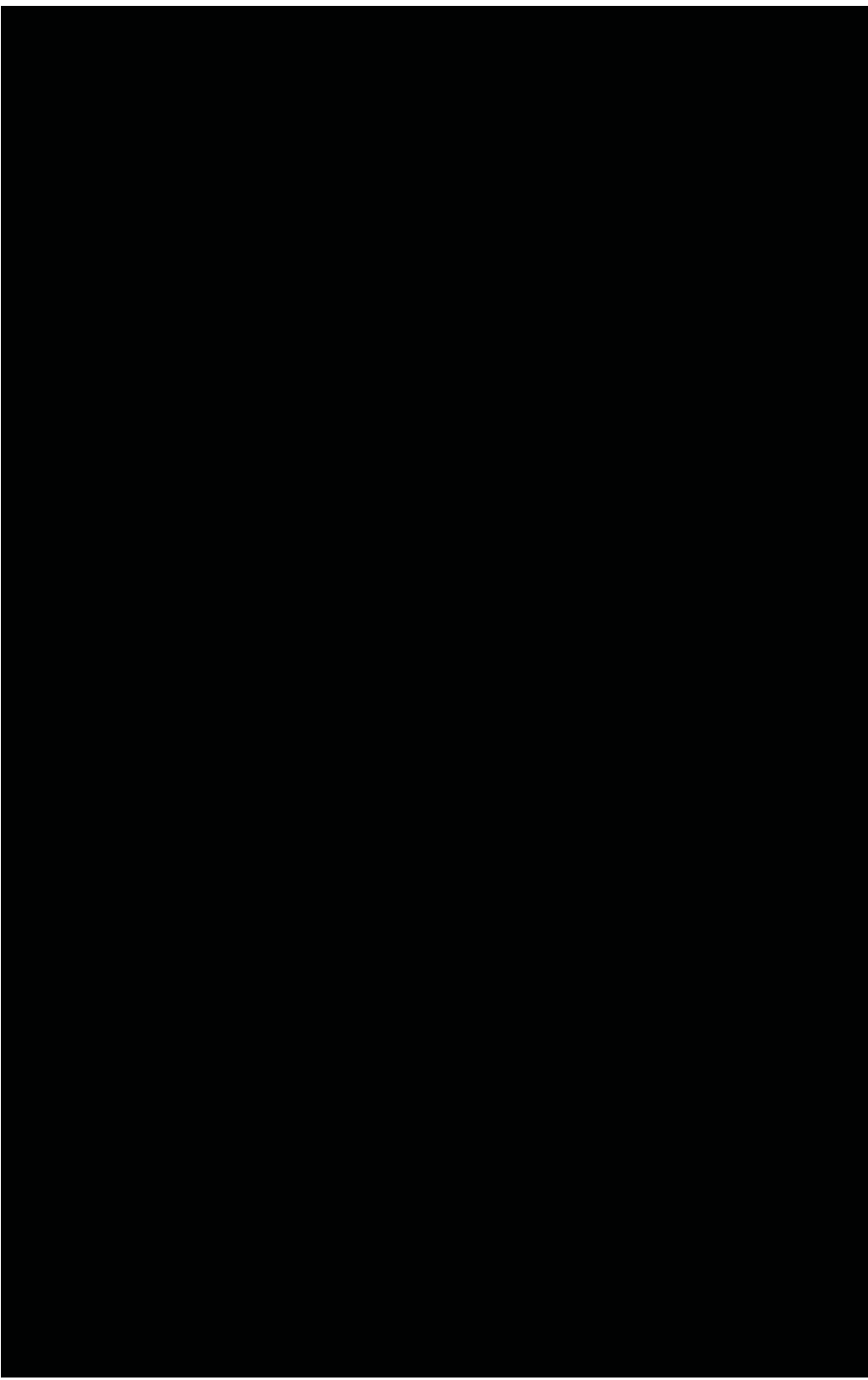
Drills for Head Position

- Keep it simple
- Kick in streamline position with head down, with or without a board, then couple together with swim watching for the head to remain in the neutral spine position
- 10*50 as 25 stream kick, 25 swim working on head position. Progress the combination of drills and swim into longer sets to gain endurance but keep the stroke together: Can progress difficulty with descending intervals or ask to progress effort, watch for technique
- Goggle in/out kick drill (essentially kick on side): plane hand, no 'grappling', palm facing bottom of pool, one goggle at surface one in water

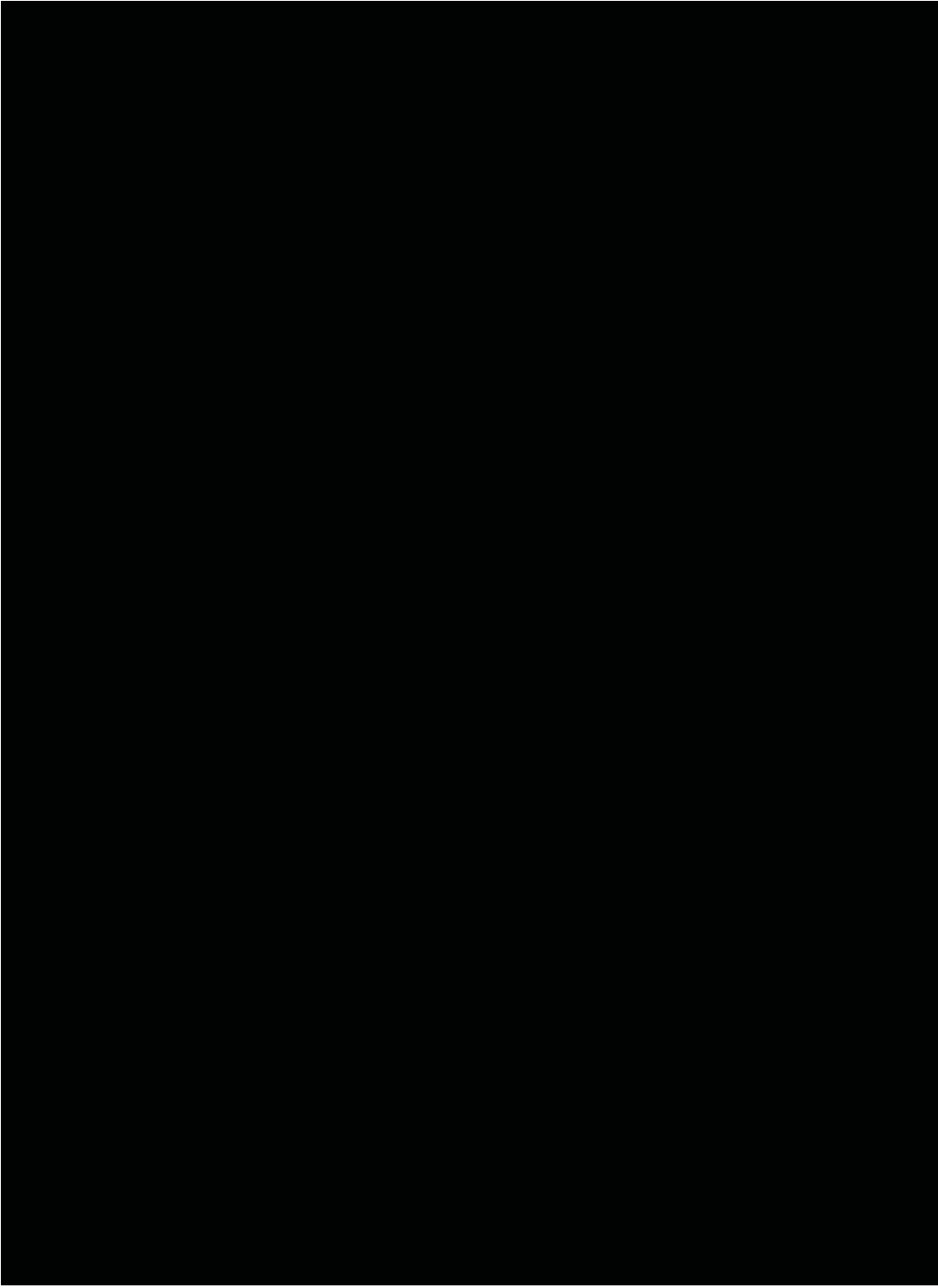
- 12 beat side to side Free: essentially goggle in/out now incorporating use of arms: 12 kicks on side, then change to opposite side with a pull smoothly with head position intact. Keep kicking through the arm change.



3 pump drill



Streamline kick to swim



Breath

Exact exhale and inhale breath cycle is critical for a 'quick' breath: timing is exhale on the bottom of the pool and inhale completed and eyes returned to centerline on bottom of pool by the halfway point of recovery. Coaching point, should not be able to 'see' hand on recovery.

- Teach the exhale reflex or 'pulse' at end of exhale rather than 'dumping' air. The exhale reflex creates the inhale cycle immediately.
- Breathing pattern control work is important not just for teaching control, but establishing at submaximal speeds a stressed breath cycle so you can see how the swimmer handles the 'quick' breath under duress.

If you didn't have to breath...

- The breath cycle needs to be such that it doesn't impede the stroke cycle. Using breathing pattern work you can ask the swimmers to think about how their breath vs non breath cycles match, and look for symmetry on both left and right side breath cycles.
- Coaching points on non breath cycle:
- Eyes on bottom of pool, head position with neutral spine, loose high elbow recovery, symmetry of recovery action and hand placement for entry
- Underwater, pulling action is symmetrical, hands stay on their own sides no cross over

- Breath cycle: look for minimal change vs the non breath cycle: goggle position, exhale cycle completed quickly, symmetry of arms impeded by breath, hand placement on entry same as non breath cycle, finish of stroke same length as non breath (early exit or short stroke)
- Under water, do the hands 'follow' the breath and stray from their path and own side. Any unnecessary movement will either add to or lessen time of an action and have an effect on the timing somewhere else on the stroke.
- Coaching point: breath 5, during non breath phase, ok, this is what the stroke feels like, ok, I am getting ready to breath, exhale ready, now go, breath and back on the center line again: have swimmers assess their own feeling of symmetry

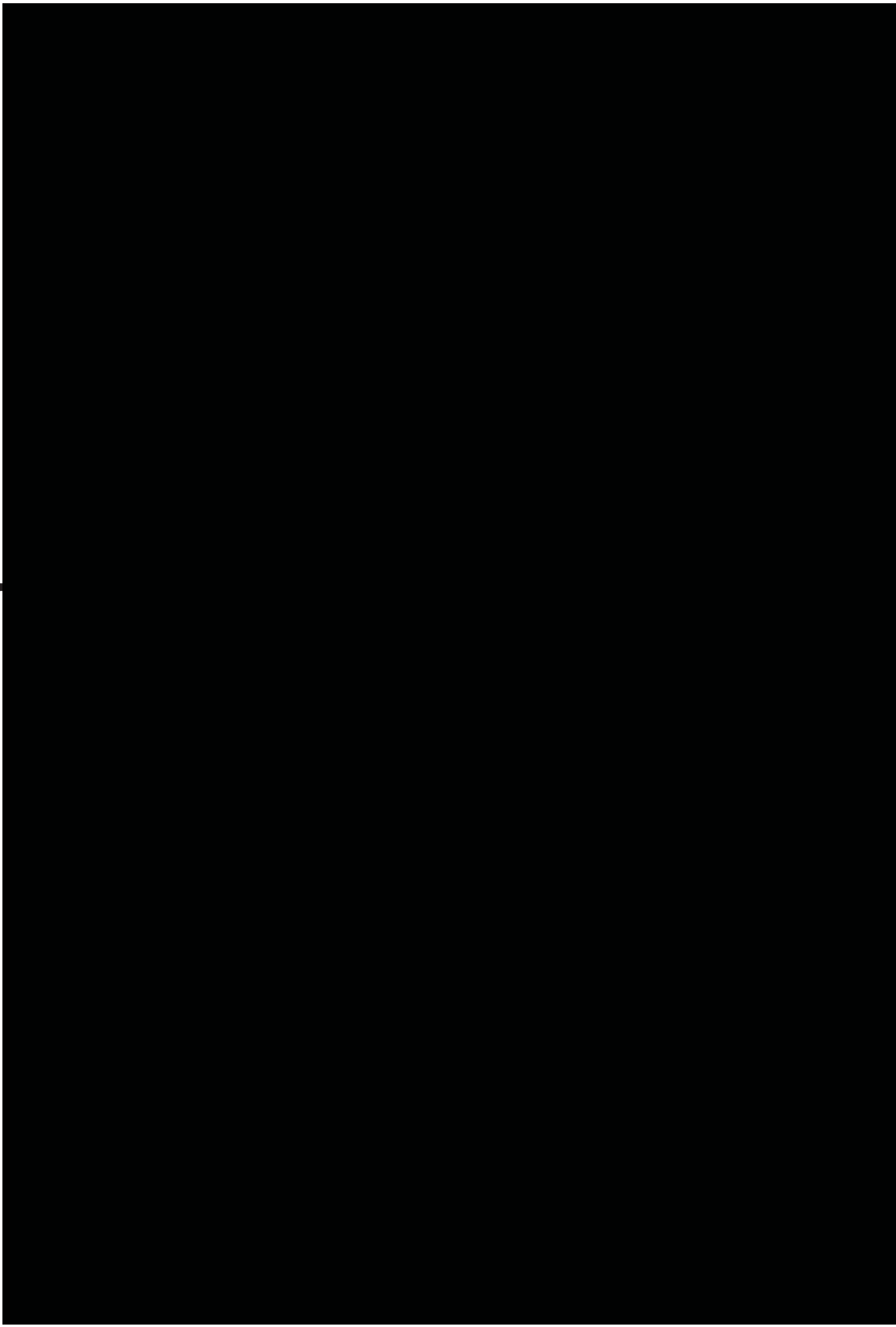
Non breath cycle



Teaching the pull

- Angle of attack on the catch: drive finger tips down and 'vault' elbow upon catch, recruit hand and elbow together through the middle, carry push phase past the hips
- Coaching tip: hand and elbow need to have equal pressure through the middle, helps avoid dropped elbow and slip
- Drills: dog paddle, head up free, fists free ,
- Timing of arms: as recovery hand passes head, pushing arm under head: connectivity of pull/recovery action vs one arm at a time
- Pull: Band only, promotes connectivity
- Memory positioning work (physical manipulation)

Drills for pull



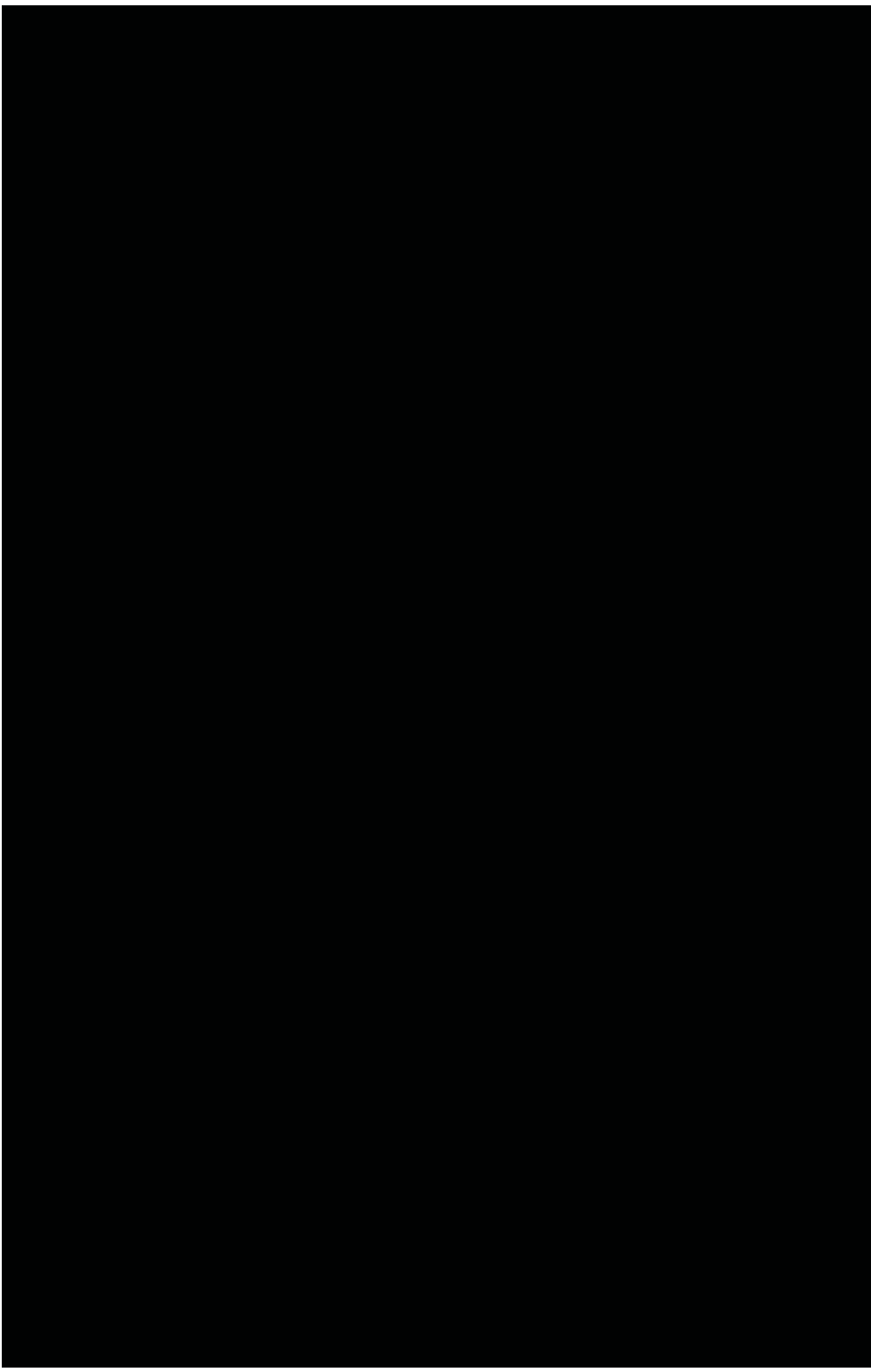
Teaching the Recovery

- High elbow, lead elbow, length of recovery through the elbow, loose relaxed muscles
- If the hand leads the elbow, (spearing the recovery), the muscles remain under constant tension, lessening relaxed look of recovery
- **Back of hand drill:** one drill many uses:
- keep the back of hand on the water through recovery, automatically places elbow in the correct position for elbow led recovery
- gives tactile feedback on tracking from back to front vs side to front

Back of hand drill continued

- Teaches the correct 'sausage' shape of the recovery vs an oval ellipse
- Also helps with tactile feel of timing for breath cycles as head must be down and nose on center line as hand passes head
- Tactile hand placement in front of shoulders, can feel the slice inwards (usually associated with the breath cycle and nonsymmetrical breath cycle.
- Couple the drill with swim to see how stroke changes with swim: the look should be similar

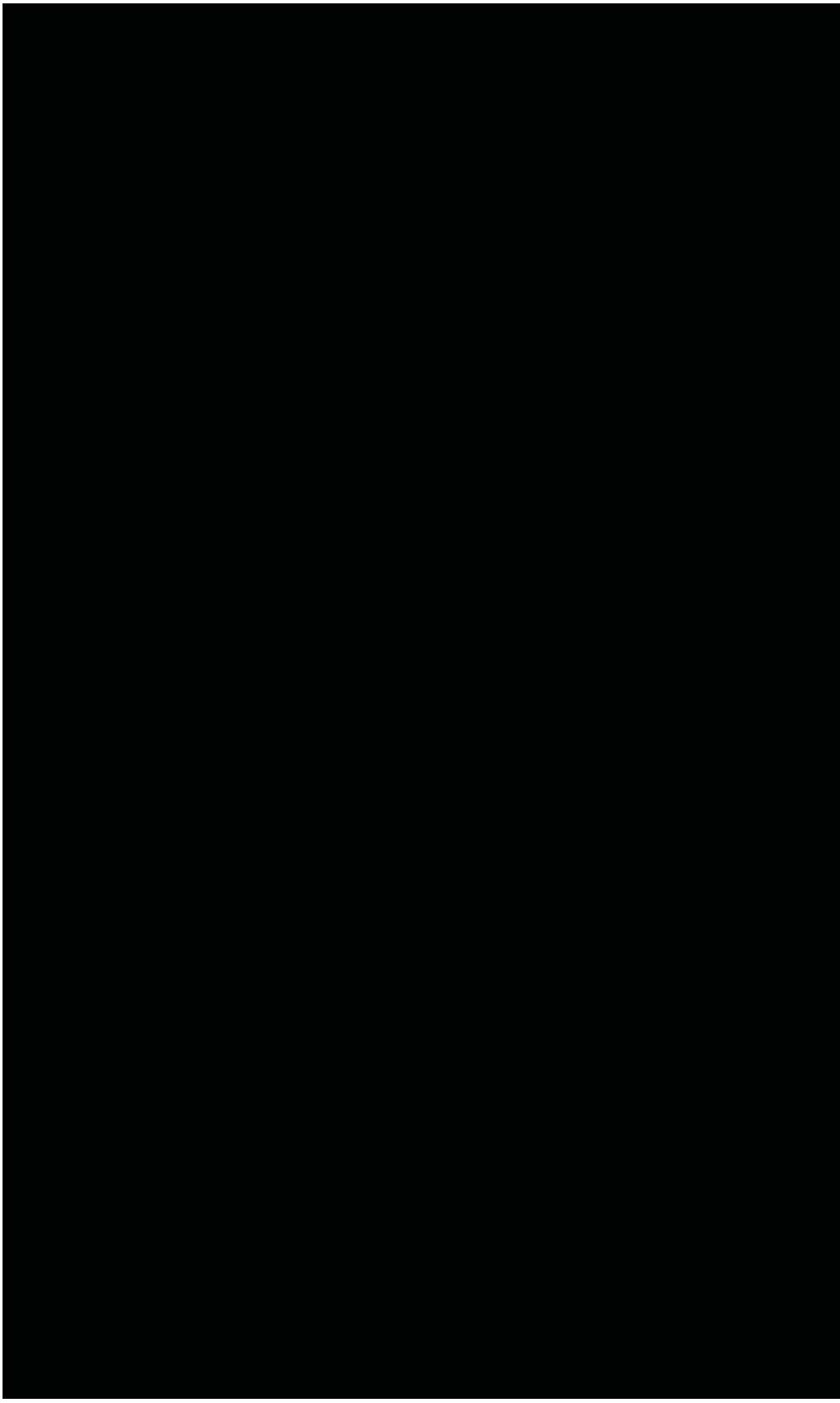
Back of hand Drill video



Kick Kick Kick!

- Freestyle must have fast, propeller like foot speed
- Move as much volume of water as possible with feet in the water, not thrashing the surface like an old fashion stern paddle wheel boat
- Streamline kick with the head down, with and without board
- Develop kick not only on endurance but all out maximum volume of water moved initiative
- Goal is 75 meter kick = 100 free time
- Volume of kick per practice should be around 20-30%

Steamline kick, max volume water



Kick continued

- Kick Swim sets: must see the tempo of the kick on kick only (with or without board) matched while swimming (no drop off in tempo)
- Start with 12.5 kick 12.5 swim, progress to 50's (25k 25 S) then to 100's and beyond.
- 16*50 as 4*{ 25 k/25s} on 55/50/50/45 (40?)
25 s/25 k
50 k
50 s (hold kick together)

Kick continued

Correct kick: no bent knees and 'plunky' feet

- Kick on all planes:

front: streamline head down, use a snorkel

back: small tight kick, concentrate on up beat

side: kick both directions, forward and backward

Use of fins: watch for bent knees, but very good for working both directions (up and down) on kick, and adds a strength component

20*25 max @ 45, 2 kick! 2 swim max K! no Breath: very hard to do correctly with no fade

- Kick swim sets get swimmers to think it's a kick set they happen to be able to use their arms on

More kicking...

- Just as you want to develop lactate fitness in swim, it is critical that the legs be singled out and given the same treatment. Plan your workouts so that you move the kick sets around and not just in the same spot in the practice. For instance, warming up the legs is not the same as training them. There are three main features of leg fitness I think are important for 200 and down events:

Lactate production: maximum lactic acid output

Lactate Tolerance: ability to sustain the effort

Lactate flushing: ability to get rid of lactate after efforts to reduce residual fatigue

- Lactate Production: absolute output; shorter efforts, enough rest to make sure you get what you want in effort, go to fatigue:
 set design: 20*25 @ 40 e/f and later on 4-6*(2-3*50) @ challenging interval (@45 or 50) with 60 sec between sets (or more dependent on time of year)
- Lactate Tolerance: 20*50 E/F,E/2F,E/3F, E/4F,E/5F@ 70
- Lactate loosen: use for at end of workouts especially through late season: as 4*150 as:
 100 Kick hard+50 (1/2 100 time)/100 kick hard plus 2 sec + 50 (1/2 that 100) /100 Kick hard plus 4 sec + 50 (1/2 that 100) + 150 ez kick look good

Swimming: the home wave

- The good freestylers develop a 'home wave' that as you see from the side starts at the head and lasts to the feet where the feet are ahead of the crest of the kicking wave (surfing it). The goal of your recovery and angle of the attack for entry is to not break up the bow wave at the front. Reach over it, enter clean. Likewise the goal for the kick is to keep the feet in front of the wave, and not break it up with crashing kicks. Use of fins, and stretch cords, helps create this effect in practice.

Home wave



Training sets for sprinting

- Base Phase:
 - still need to do sets like 20*100 Best average.....
@ 145 or more younger swimmers 2*10*100
 - 3*(4*200) 100 swim 100 Kick, each group of 4
200 dec 1-3
 - 20* 50 @ 60 e/f
 - 10* {(100 @ BT + 15-18 sec) @130/140
+ 50 max @ 60 }
 - 4*100 @ 4 min as 75 max + 12.5 U/w fast...
 - Estimate a decent target time such as $\frac{3}{4}$ 100 RP
plus 3-4. Very hard set

- Speed Phase:

$3 * \{(3 * 50) + 25 + (2 * 50) + 2 * 25 + (1 * 50) + 3 * 25\} + 200-300$ between the rounds snorkel

if possible to work on stroke symmetry.

Goals: 50's @ 200 Race Pace, 25's @ 100 Race Pace. 25's should have the correct # of strokes and breaths you want to see in the race....

Hitting time is one thing, following race plan is another. Add an element to 25's, take a second off goal time for a hand touch vs foot touch.

- 3*(4*25) + loosen: 1-3-25's @ 100 RP and 4 at 50 RP!
- 3-5*50 from Dive dec on reliable stroke. Should be no more than 1 sec between at the start, then move towards .5 sec
- Test Set: 100 m 4*50 @ 2 min. ½ 100 RP run this as often as you need going into a cycle and in the middle of a cycle (Indicates fatigue, which may be desirable, just need to know how much) Different swimmers will respond differently at points, especially your more muscled and harder working ones, so keep track of results

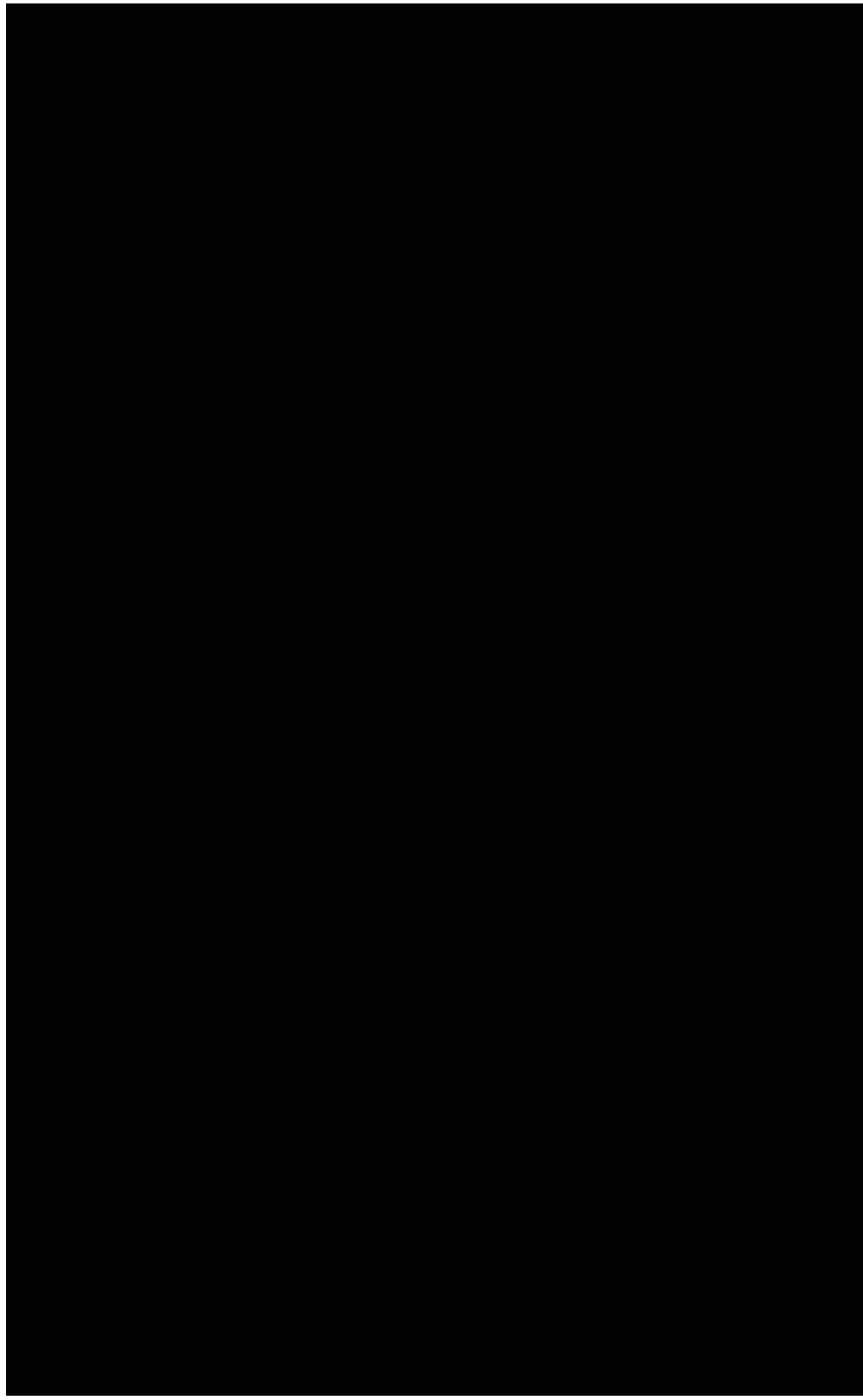
Under water Kick/Turn

- Always! 4 kicks on the side/ 2 on the front on every repeat to start, and insist on the turn.
- Kicks should be uniform in size and the final kick into the stroke should be at the surface right into the stroke (then do free kick)
- Kick continuous into the turn, the final free kick into the wall should be followed immediately by the dolphin kick into the turn.

Turn sequence

- In stroke: last stroke speed to wall, coordination of head (not looking at wall), and timing of finishing hand and dolphin kick
- Rotation: size of flip turn (plant head deeper for smaller foot to wall distance) speed of rotation
- Push offs/glide: planting feet at right spot on wall, not too deep, glide push is powerful
- Kicking Breakout: hard u/w kick at correct temp
- Transition: extending breakout arm into catch, head down, burst forward with kick explosion

Improper Turns



Freestyle vs other strokes, training

- As a breaststroker or flyer will not do the entire practice on full stroke, your freestylers need to be prepared with that thought in mind that too much free will promote fatigue on freestyle and propagate errors. If you are swimming a lot of free, on the easier repeats, or endurance, use a snorkel or a breathing pattern and couple with Drills. On aerobic days, you may wish to keep a IM base for the practice to keep the stroke fresh for the harder workouts down the week. For instance, Tom Johnson at UBC often does 150's fly-bk-br for aerobic work with Brent Hayden
- I have found breaststroke work regenerative for Distance swimmers

Under water kick



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