



- Breaststroke
- Win the spaces (recovery, glide, kick)
- Hit your line dynamically
- High DPS strokes that are effective (Rikke Pederson & Kevin Cordes) and high tempo strokes (Rebecca Soni & Adam Peaty) have the commonality of driving forward into their line
- Pretty much all elite 100m breaststrokers' race with this pattern: tempo slows slightly along 1st 50, then tempo revs up in 2nd 50
- Adam Peaty has fastest tempo I've ever seen (under 1 second per stroke on 2nd 50)
- To rev tempo (and not spin): glide less, fire the kick faster
- You have to increase tempo in 2nd 50 to maintain speed because your muscles will be fatigued in 2nd half of race. Have to make up for that with higher tempo. Trying to hold tempo can actually be detrimental.
- 200m breaststroke tempo trend of the best ... from the 1st 50 tempo, the 2nd 50 slows slightly, then 3rd 50 tempo gets faster, and 4th 50 tempo gets even faster
- High tempo should still preserves the important aspects of the technique - wide outswEEP, breathe on in sweep, still get your head and body in line
- Don't increase tempo by cutting off the outswEEP. It'll lead to swimmers lifting up for the breath too early which can then compromise body position.
- Most common flaw is hands smashing together right in front of the chest... should be a smooth rounded transition from insweep to recovery... fingers touch during the recovery
- Being effective with high tempo means using your body... driving your body forward into the line
- Keep elbows and hands out of the way of your body lunging forward. Wide elbows and hands are ok.
- From the front view, the elbows don't squeeze inside the body line. It's ok if the hands don't ever converge.
- There is a trade-off between having a narrow body profile of the recovery (narrow hands and elbows) and using your body ... I prefer the net gain from engaging your body (ex of body driven stroke is Rebecca Soni)
- An effective lunge/glide is often mistaken for the kick, but so much of the lunge/glide happens before the feet turn out and engage with the water.
- Arm Stroke Steps: OutswEEP Breathe on insweep Hands get deeper during insweep (which coincides with body rising for breath). Many elite breaststrokers have hands lower than the bodyline
- Elbows converge on body and hands rise to the surface to transition to the recovery
- Elite breaststrokers have later kick than what most people think. Knees bend to set up the kick as the hands transition to recovery.

- Pull while your lower body is in line. Kick while your upper body is in line. With this "late" kick timing, bringing the heels up fast is so critical.
- Late kick timing is actually two things most likely: 1) heels not coming up fast enough or 2) body not lunging forward into line. (the hands shoot forward but body and head doesn't)
- One aspect to look at is the wake/turbulence that develops at the low back as the swimmer is in their line ...minimizing that turbulence can decrease drag ... work on it by keeping the hips up and flattening the low back
- Turn palms down during the recovery. Palms down relaxes bicep muscles so that arms are more prone to extending.
- Palms up tightens bicep muscles and arms are naturally apt to pull towards body. Salo believes it to be important to have the thumbs down on recovery. Elbows tend to drop with thumbs up. (like a boxer punching) Hands drive and do not dive downward.
- There is always a downward component to the leg extension of the kick and Dave Salo remarks that the lesser skilled athletes aren't as smooth as their legs rise into the line from the downward extension. Higher skilled athletes are much smoother as their legs rise into line.