

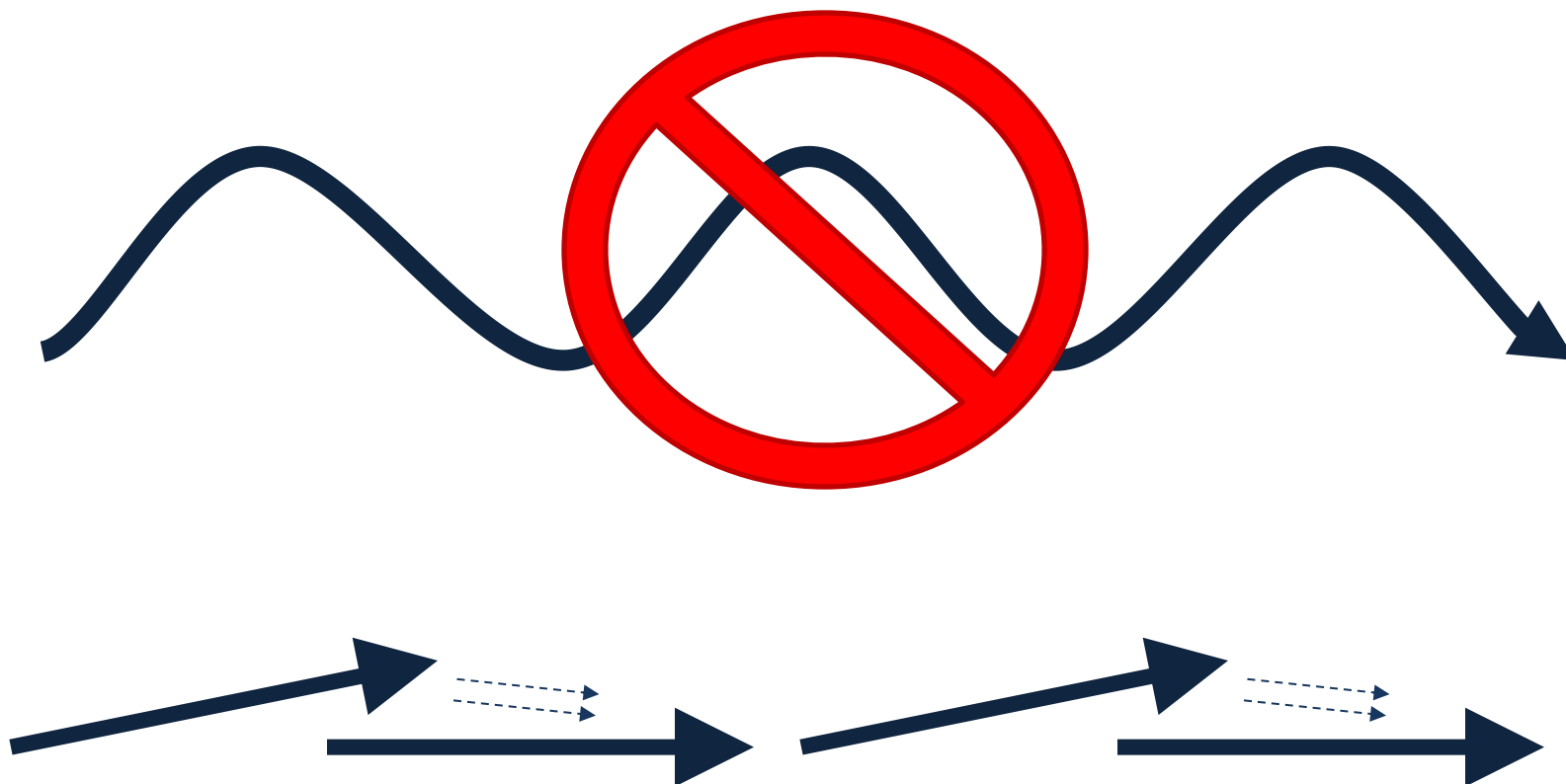


Butterfly

Russell Mark
National Team Division
High Performance Consultant

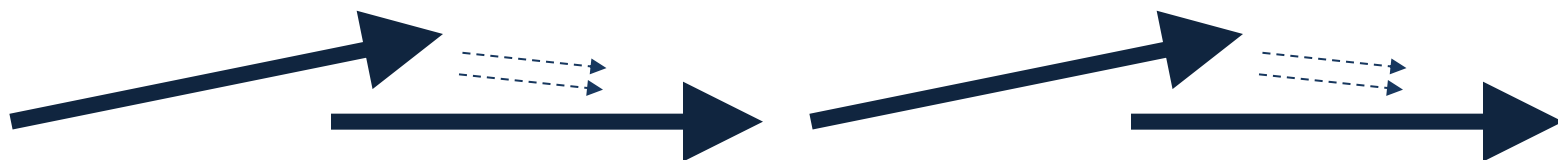


Butterfly





Butterfly





Technique Priorities

- Three Top Priorities
 - Catch
 - Press
 - Kicks
- The most important aspects!

The rest of the stroke is designed around the priorities

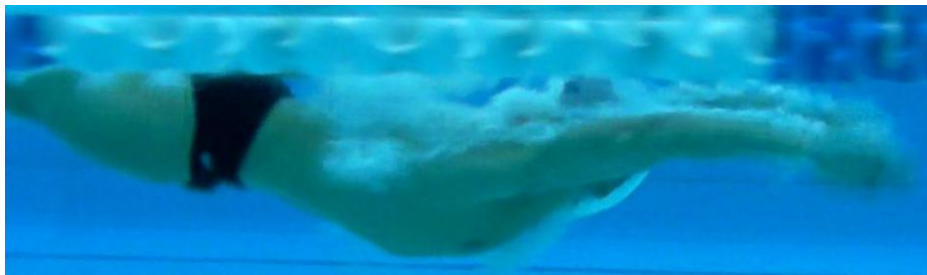
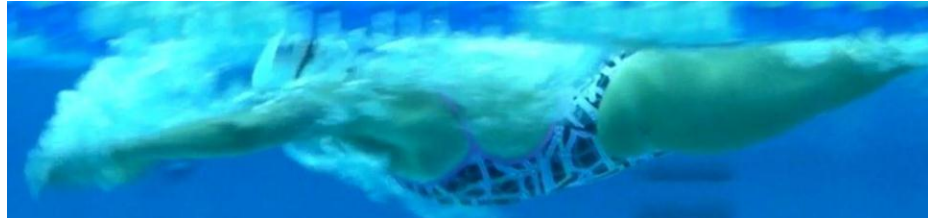


Catch

- Move body forward → push water back
- Fingers pointing down, palm facing back
- Elbow bend so forearm angles vertically

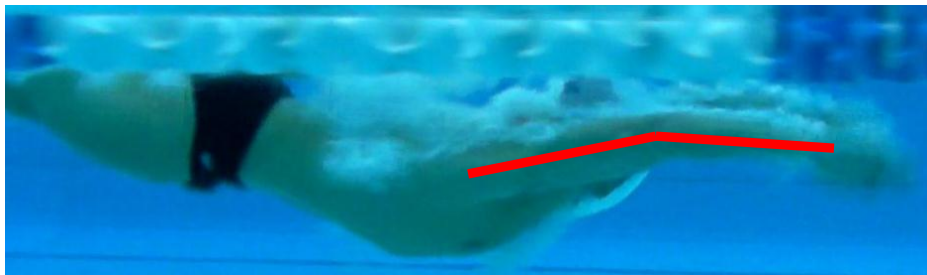
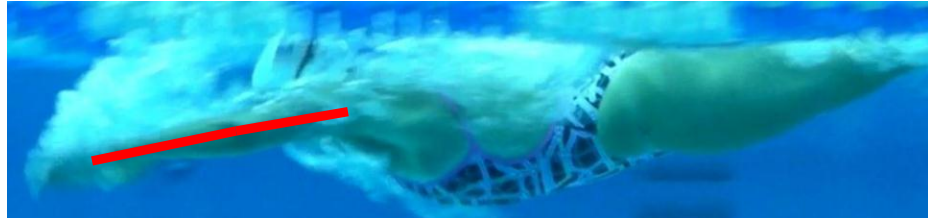
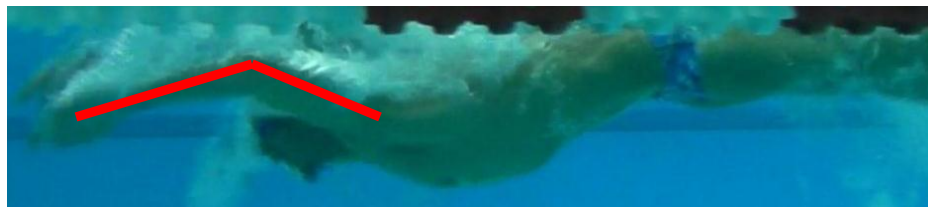


Catch





Catch





Catch

- The catch is critical, but harder than free
- Looking forward makes it easier
- Arms go wide after entry/extension
 - Palms stay facing back

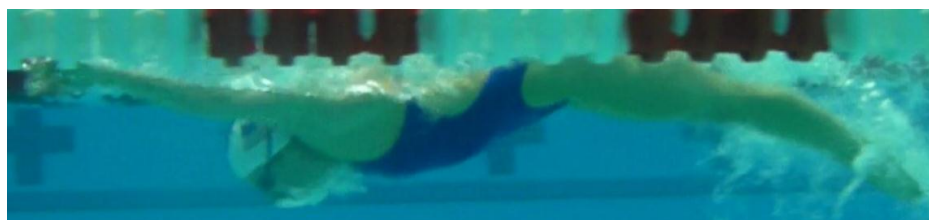
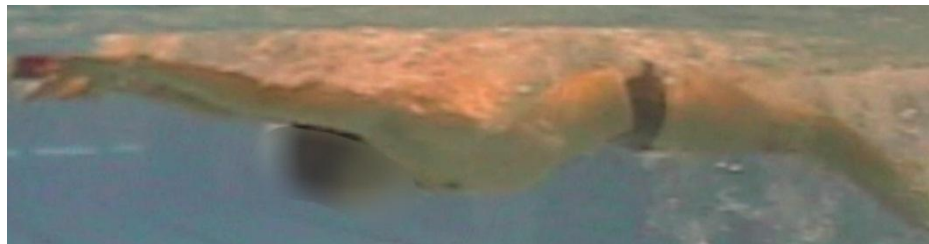
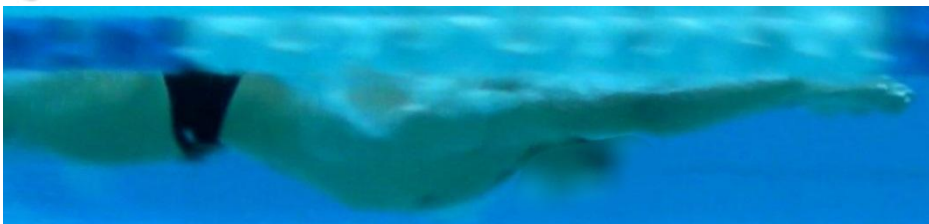


Press

- Drive body forward
- Press forward with chin and chest
 - Chin not tucked, head not diving down
 - Pressing too deep can compromise catch



Press





Press

- 3 actions happening together
 1. Press body forward
 2. Hands enter/extend forward
 3. Kick
- Kick your press and entry forward!



Kicks

- Two kicks, equal in power and size
- 2nd kick (at exit) is the kick most often missed
 - Because the knees never bend to set it up
 - Drive knee downward (otherwise feet exit water)



Kicks

- Timing
 1. Kick hands forward and press forward
 2. Kick breath forward
- Deep kick is ok, as long as kicking body forward



Breath Technique

- Stay low, breath forward
- Late breath is key
 - Pull forward into the breath
- 2nd kick is critical



Pull Pattern

- Teach the priorities and pushing water back
- Don't teach a specific pull pattern
- Pull pattern dictated by how deep someone presses their chest/body
 - Deeper press → wider catch → narrow finish
 - Shallow press → shoulder-width catch → pull straight back



Other Aspects

- Head position
 - Tilted forward
- Hand entry
 - Shoulder width or wider
 - Palms downward, thumbs could be first
- Pull finish
 - Rounded finish, sweeping into the recovery
- Recovery mechanics
 - Relaxed, sweeping out to the side



Breathing Pattern

2012 Olympics Men's 100 Fly

	Time	1st 50	2nd 50
Phelps (USA)	51.21	3-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	2-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-
Le Clos (RSA)	51.44	3-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-3
Korotyshkin (RUS)	51.44	3-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-2-2-1
Cavic (SRB)	51.81	3-2-2-1-2-1-2-2-1-2-	2-2-2-2-2-2-2-2-2-4
Deibler (GER)	51.81	3-2-1-2-1-2-1-1-2-1-1-1-	2-1-1-2-1-1-2-1-1-2-1-1-1-2-1-1-1
Verlinden (NED)	51.82	1-2-2-2-2-2-2-2-2-1-	1-1-2-2-2-2-2-2-2-2-3
McGill (USA)	51.88	3-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	2-1-1-1-1-1-1-1-1-1-1-1-1-1-1-3
Czerniak (POL)	52.05	3-2-2-2-2-2-2-2-2-	1-1-1-2-1-2-1-2-1-2-1-2-1-2

2012 Olympics Women's 100 Fly

	Time	1st 50	2nd 50
Vollmer (USA)	55.98	3-2-2-2-2-2-2-2-2-1-1	2-2-2-2-2-2-2-2-2-2-1
Lu (CHN)	56.87	2-2-2-2-2-2-2-2-2-2-	1-2-2-2-2-2-3-3-3-3-1
Coutts (AUS)	56.94	2-2-2-2-2-2-2-2-2-1-	1-2-2-2-2-2-2-2-1-2-4
Sjostrom (SWE)	57.17	3-2-2-2-2-2-1-2-1-1-1-	1-1-2-1-2-1-2-1-1-1-1-1-1-1-1-1-1-1-
Bianchi (ITA)	57.27	4-2-2-2-2-2-2-2-2	2-1-2-2-2-2-2-2-2-2-2
Ottesen (DEN)	57.35	4-2-2-2-2-2-2-1-2-	2-1-2-2-3-1-1-2-1-2-2-4
Donahue (USA)	57.48	3-3-2-3-2-2-1-2-1-1-1-	2-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-2
Gandy (GBR)	57.76	3-2-2-2-2-2-2-2-2-1-1	2-2-2-1-2-2-2-2-2-2-2-3



Breathing Pattern

2012 Olympics Men's 200 Fly

	Time	1st 50
Le Clos (RSA)	1:52.96	2-1-1-1-1-1-1-1-1-1-1-1-1-1-1- 1-1-1-1-1-1-1-1-1-1-1-1-1-1-1- 1-1-1-1-1-1-1-1-1-1-1-1-1-1-1- 1-1-1-1-1-1-1-1-1-1-1-1-1-1-2
Phelps (USA)	1:53.01	2-1-1-1-1-1-1-1-1-1-1-1-1-1-1- 2-1-1-1-1-1-1-1-1-1-1-1-1-1-1- 2-1-1-1-1-1-1-1-1-1-1-1-1-1-1- 2-1-1-1-1-1-1-1-1-1-1-1-1-1-1-
Matsuda (JPN)	1:53.21	2-1-1-1-1-1-1-1-1-1-1-1-1-1-1- 1-1-1-1-1-1-1-1-1-1-1-1-1-1-1- 1-1-1-1-1-1-1-1-1-1-1-1-1-1-1- 1-1-1-1-1-1-1-1-2-1-1-1-3-2-3
Jukic (AUT)	1:54.35	2-2-2-2-2-2-2-1-1- 1-1-1-2-1-1-2-1-1-2-1-1-1-1- ...1-1-2-1-1-2-1-1-2-1-1-2-1- 1-1-2-2-2-2-2-2-2-2-2
Clary (USA)	1:55.06	1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1- 1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1- 1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1- 1-1-1-1-1-1-1-1-2-2-2-2-2-1-2
Stjepanovic (SRB)	1:55.07	2-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1- 2-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1- ...1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1- 2-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1
Korzeniewski (POL)	1:55.08	2-1-2-1-1-2-1-2-1-1-1-1- 1-1-1-1-2-1-1-1-2-1-1-1-1-1-1-1- 1-1-1-1-1-1-1-2-1-1-1-2-1-1-1-1- 1-1-1-1-1-2-1-1-1-2-1-1-1-1-1-2
Chen (CHN)	1:55.18	3-2-2-2-2-2-1-1-1-1-1-1-1- 1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1- 1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1- 1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-

2012 Olympics Women's 200 Fly

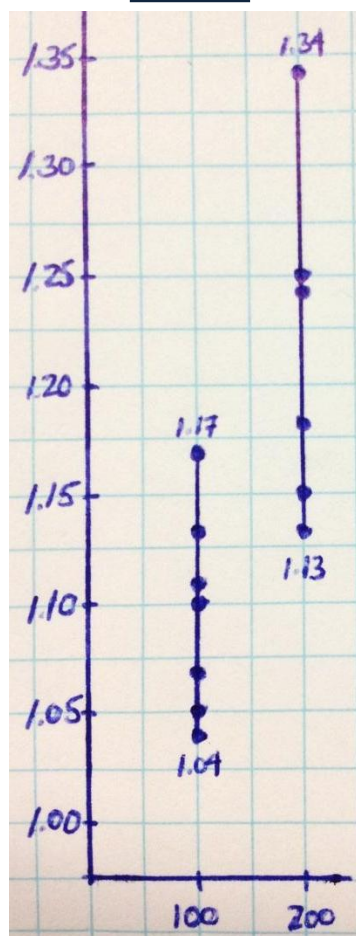
	Time	1st 50
Jiao (CHN)	2:04.06	3-2-2-2-2-2-2-2-2- 1-2-2-2-2-2-2-2-2-2-2- 1-2-2-2-2-2-2-2-2-2-2- 1-2-2-2-2-2-2-2-2-2-2-2-
Belmonte (ESP)	2:05.25	2-1-2-1-2-1-2-1-1-2-1-1-2-1-1- 1-1-1-1-2-1-1-1-2-1-1-1-1-1-1-1- 1-1-1-2-1-1-1-2-1-1-2-1-1-1-1-1-1- 1-1-1-2-1-1-3-1-1-2-1-2-1-1-2-1-3
Hoshi (JPN)	2:05.48	3-2-2-2-2-1-2-1-2-2-2- 1-1-2-1-2-1-2-1-2-1-2-1-2-1-1- 1-1-2-1-2-1-2-1-2-1-2-1-2-1-1- 1-1-2-1-2-2-2-2-2-2-2-2-2-2
Hersey (USA)	2:05.78	2-1-2-2-1-2-1-2-1-2-1-2- 2-1-2-1-2-1-2-1-2-1-2-1-1-1-1- 1-1-2-1-1-2-1-1-2-1-1-2-1-2-1-1-1- 1-1-1-2-1-2-1-2-1-2-2-2-2-3
Adams (USA)	2:06.78	2-2-2-2-2-2-2-2-2-2-2- 1-2-2-2-2-2-2-2-2-2-2-2-1- 1-2-2-2-2-2-2-2-2-2-2-2-2- 1-2-2-2-2-2-2-2-3-3-6
Lowe (GBR)	2:06.80	2-2-2-2-2-2-2-2-2-2-2- 1-2-2-2-2-2-2-2-2-2-2-2- 1-2-2-2-2-2-2-2-2-2-2-1- 1-2-2-2-2-2-2-2-2-2-2-3
Jakabos (HUN)	2:07.33	2-1-2-1-2-2-2-2-2-2-2- 1-2-2-2-2-2-2-2-2-2-1-1-1- 1-1-2-1-2-1-2-1-2-1-2-1-1-1-1- 1-1-1-2-1-1-2-1-1-2-1-1-2-1-1-2-1-2
Liu (CHN)	2:07.77	2-2-2-2-2-2-2-2-2-2-2- 1-1-2-1-2-1-2-1-2-1-2-1-2-1-2- 1-1-2-1-2-1-2-1-2-1-2-1-2-1-2-1- 1-1-2-1-2-1-2-1-2-1-2-1-2-1-2-2



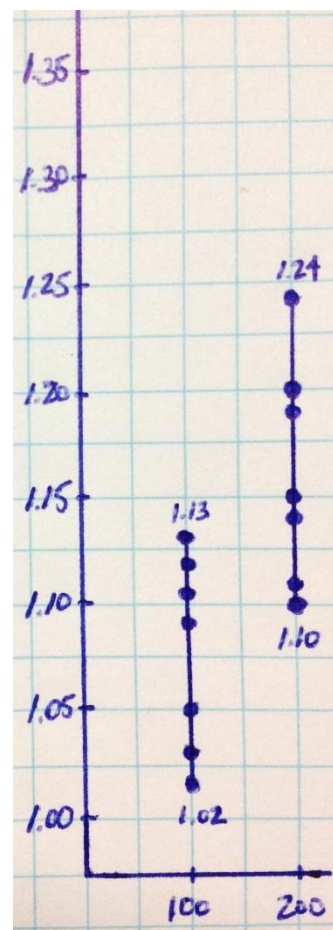
Race Tempo

2012 Top 8 World Performers

Men



Women



* Tempo in
seconds per cycle



Dolphin Kicks

Top 8 Performers from 2012 Olympic Trials

100 FLY	1 st 50	2 nd 50
Men	9	9
Women	8	6

200 FLY	1 st 50	2 nd 50	3 rd 50	4 th 50
Men	7	5	5	6
Women	7	4	4	4



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