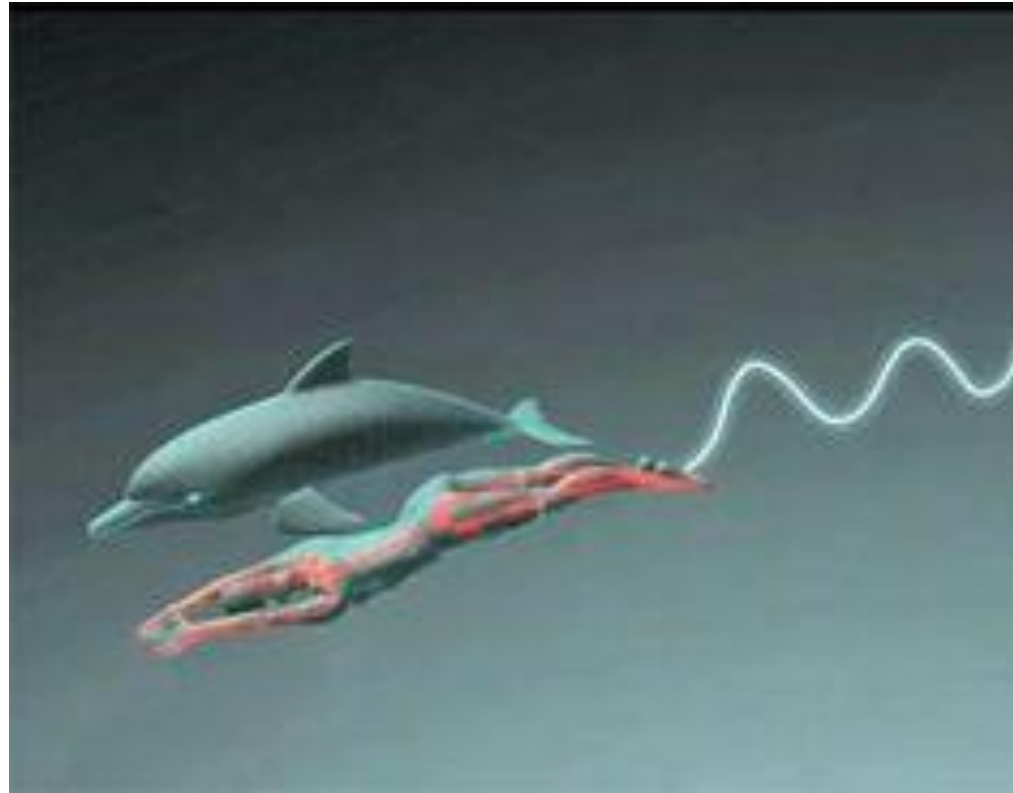


# Underwater Swimming



# The 5<sup>th</sup> Stroke

Utilized at all levels

International

Men's & Women's NCAA

Phillips 66 Nationals & Speedo Junior Nationals

High School State

Age Group?

Basically a “must have” skill to be competitive



# The 5<sup>th</sup> Stroke

Similar movement but not the same as butterfly  
dolphin kick

Not used to generate propulsion but to maintain  
speed off starts & turns

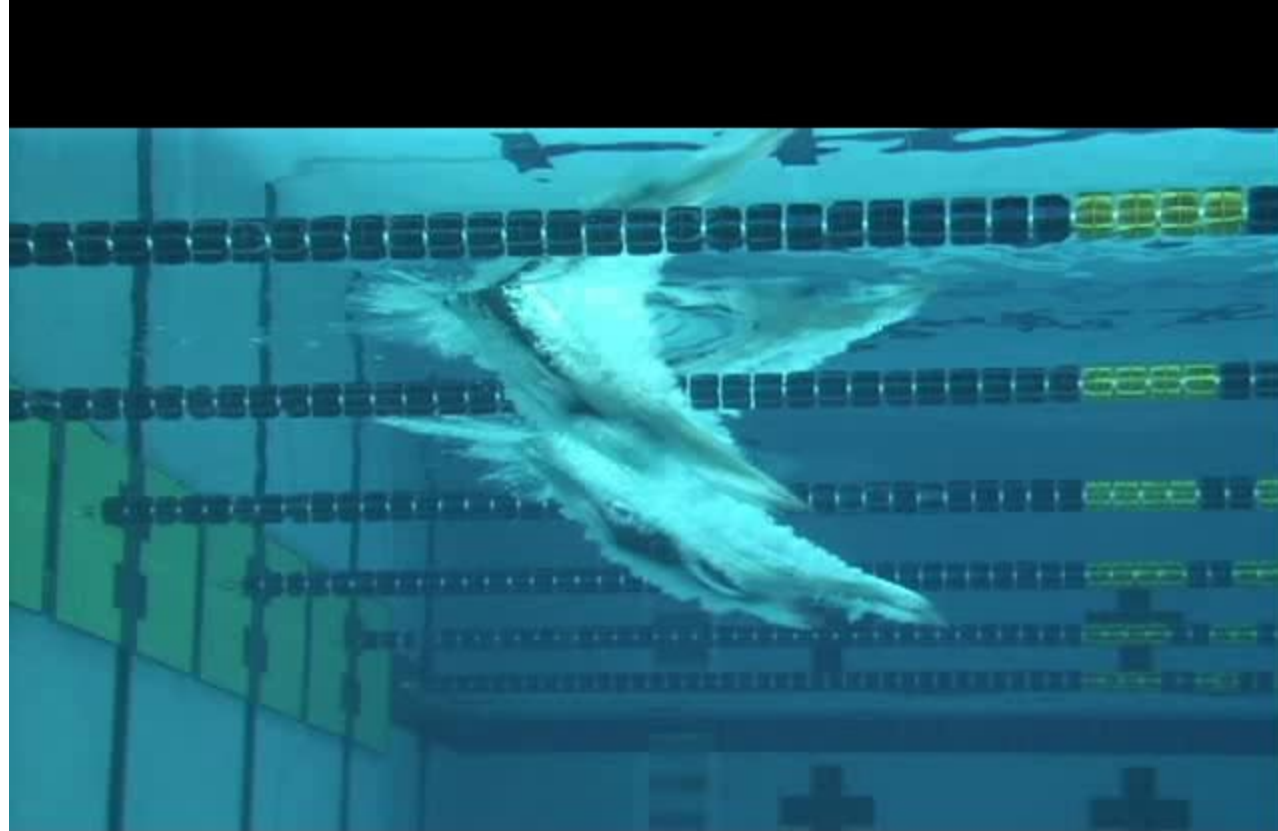
Jump off the wall

Eliminate resistance

Exhale while kicking – reduces anxiety & increases  
distance



# Dolphin Kick

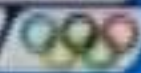


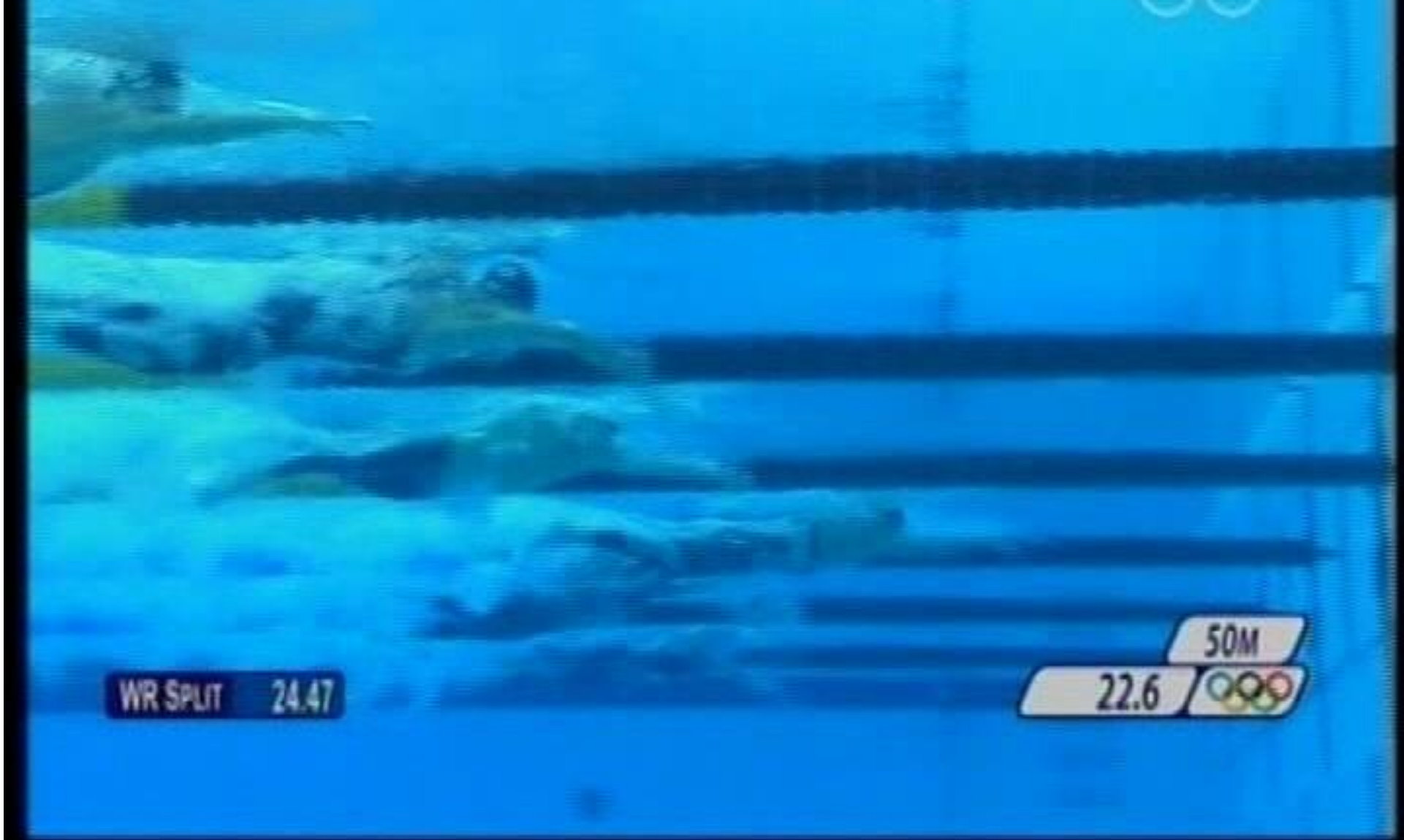
DX10

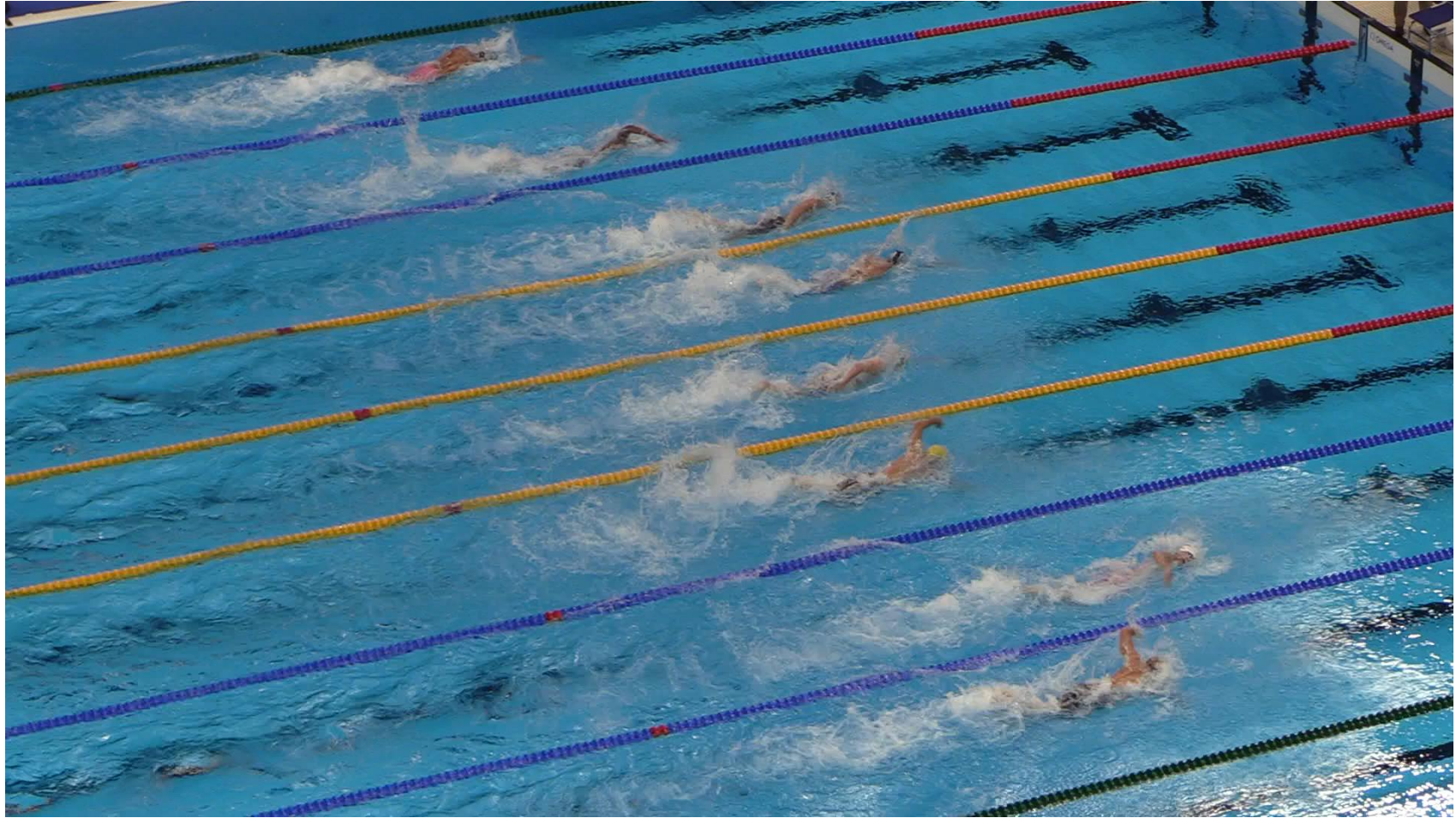


WR SPLIT 23.15

50M  
26.4







# Dolphin Kick

Movement begins in chest/upper core and travels down the body

The hips and core:

Control the direction of the kick

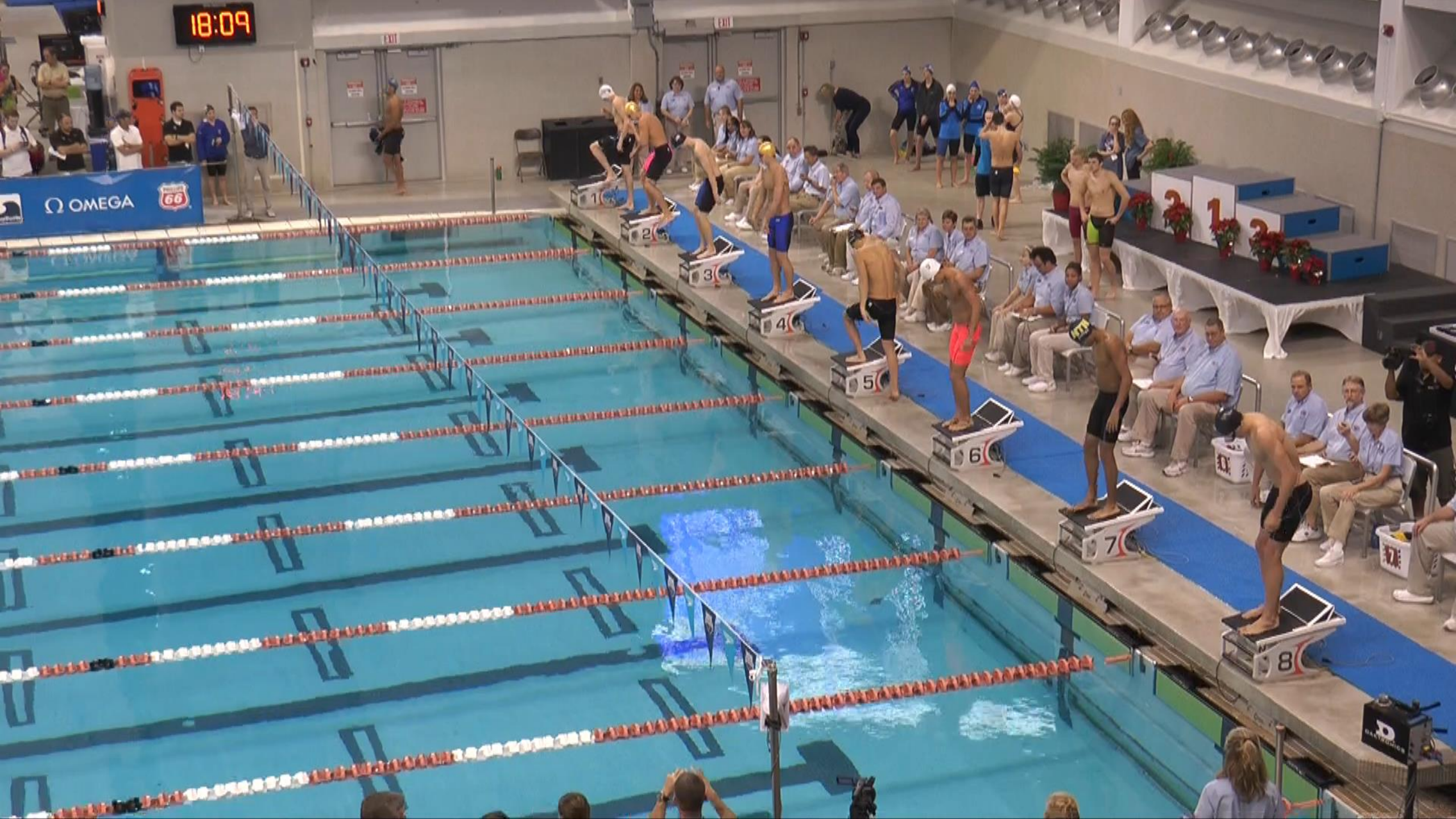
Hip movement is coordinated with the upkick

*“I roll my back through the water”* -Ryan Hoffer





18:09



Ω OMEGA

66

1

2

3

1

2

3

4

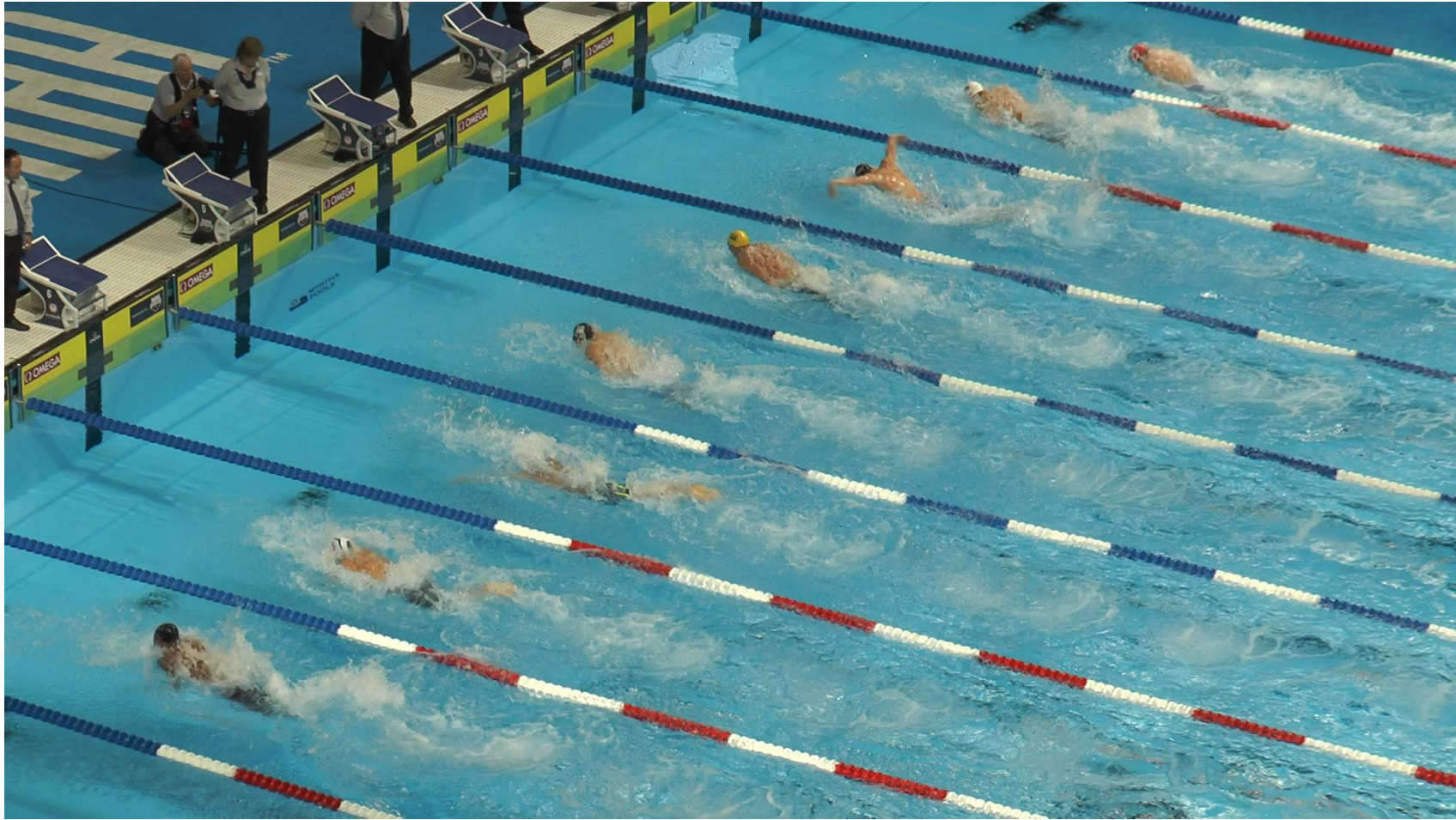
5

6

7

8

D  
DARTMOUTH



# Dolphin Kick

## Set up and follow-through

Knees bend to set-up the kick

Follow through and finish the kick in front of the body

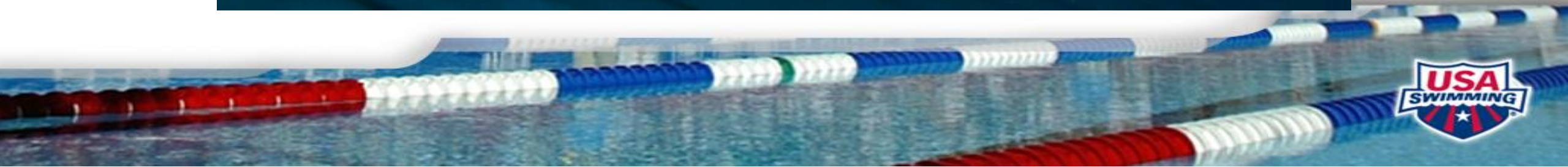
## Crack the whip!

## Kick in both directions

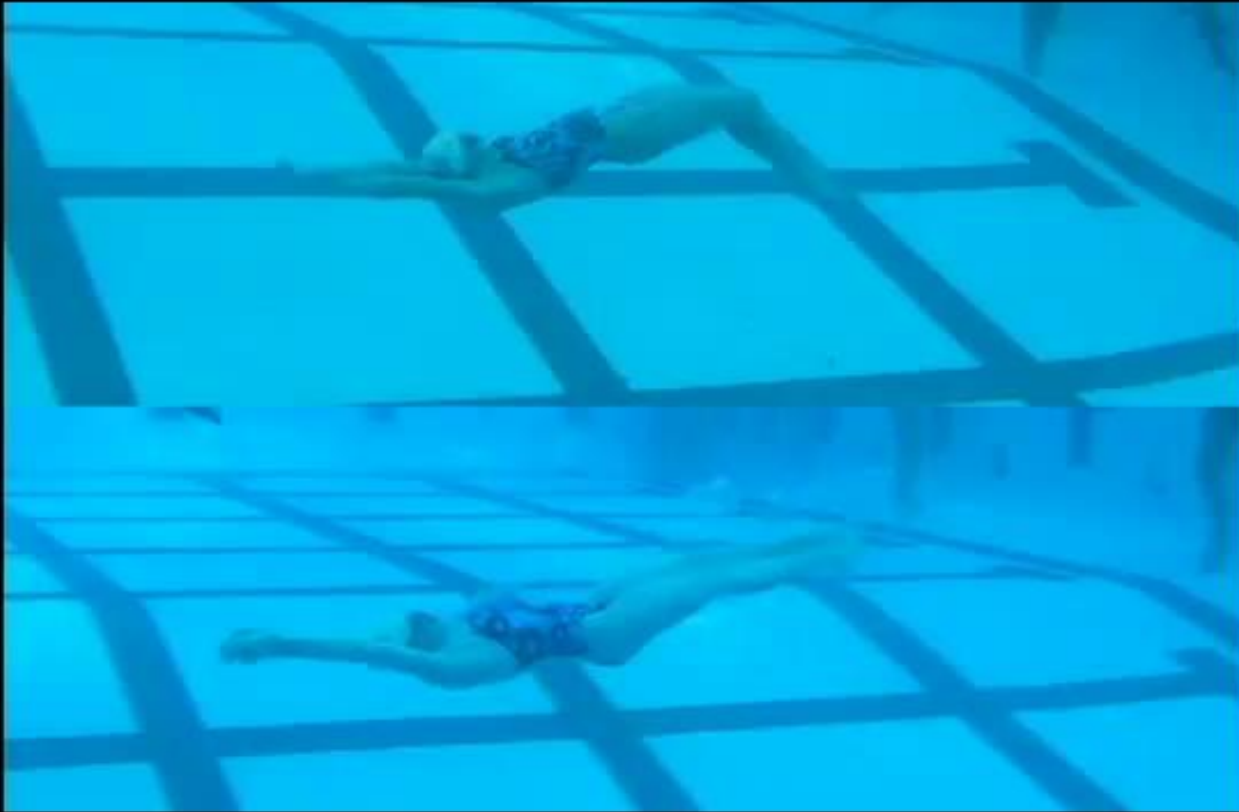
Forward kick is primary propulsion but backward kick vital for set-up



# Focus on whipping the legs to a full extension!



# Maintain Kick Amplitude



**Part of finishing the leg whip is making sure the upper body stretches forward too**



# Dolphin Kick: Hips

Hip movement is important, but doesn't drive the kick or move you forward

There is such a thing as moving the hips too much!

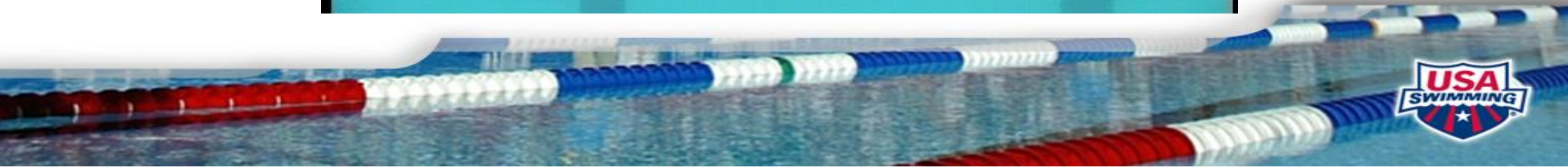
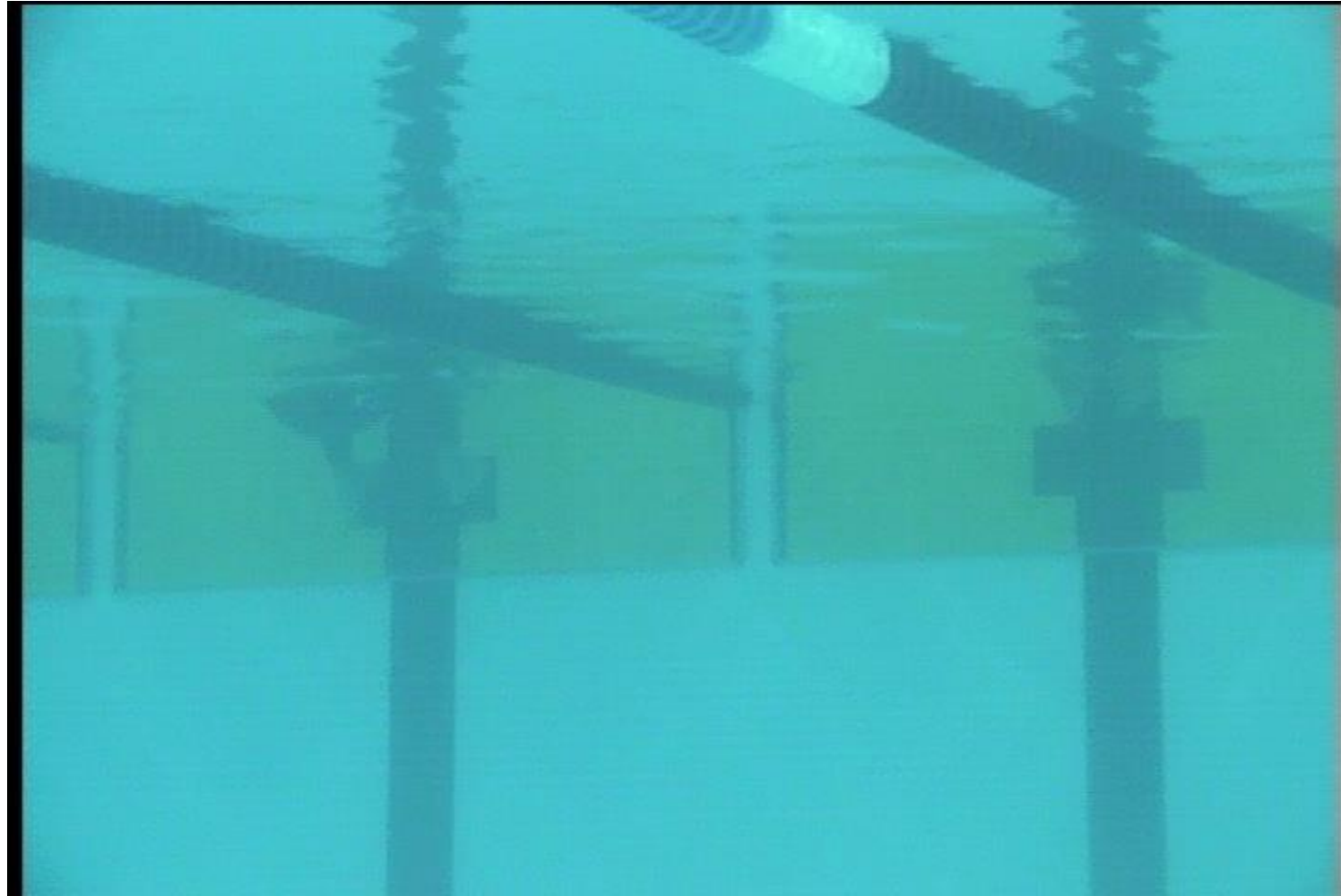
Lift the hips too much and:

The body crunches forward too much

The leg whip gets cut off

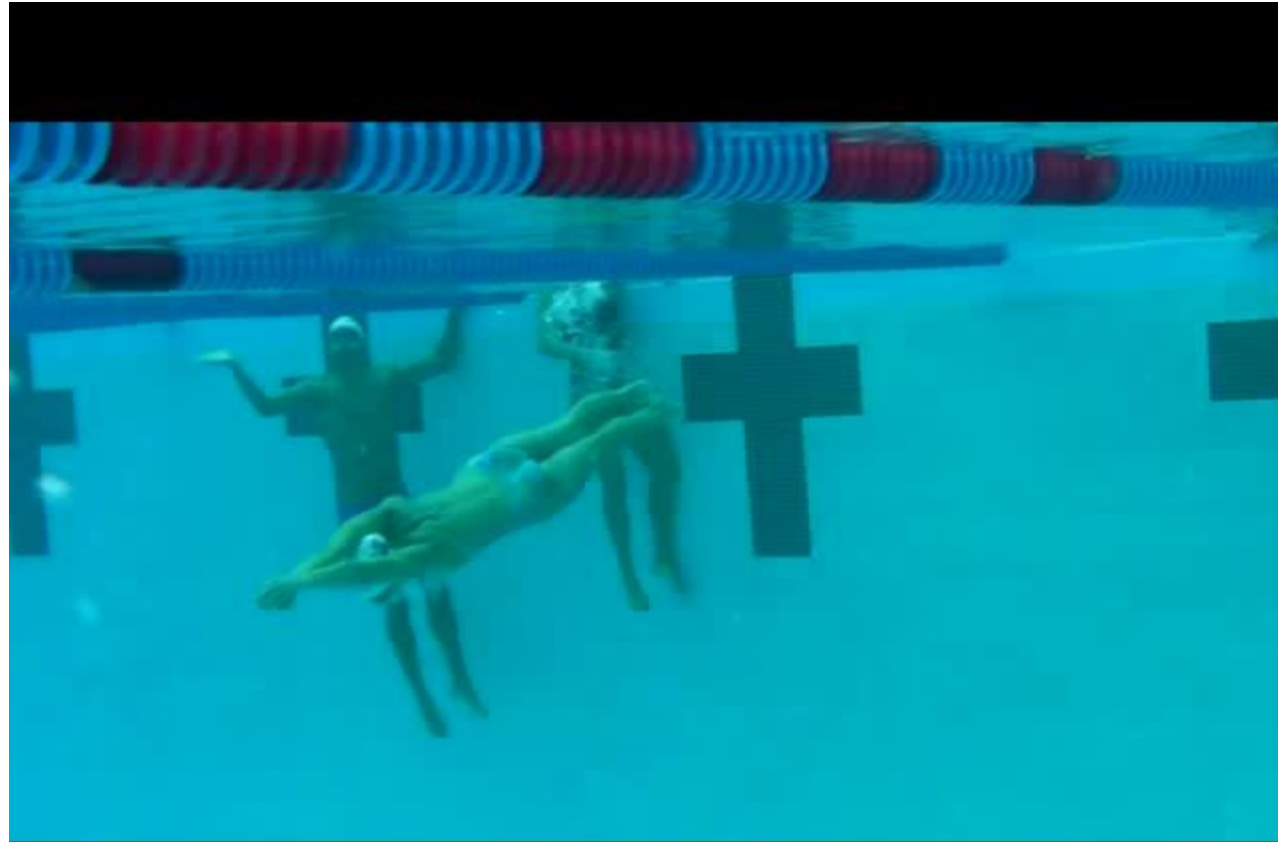


# Dolphin Kick: Hips





# Dolphin Kick: Hips



# Dolphin Kick: Back vs. Front

On your back...the forward kick is up

Helps keep the swimmer underwater

On your stomach...the forward kick is down

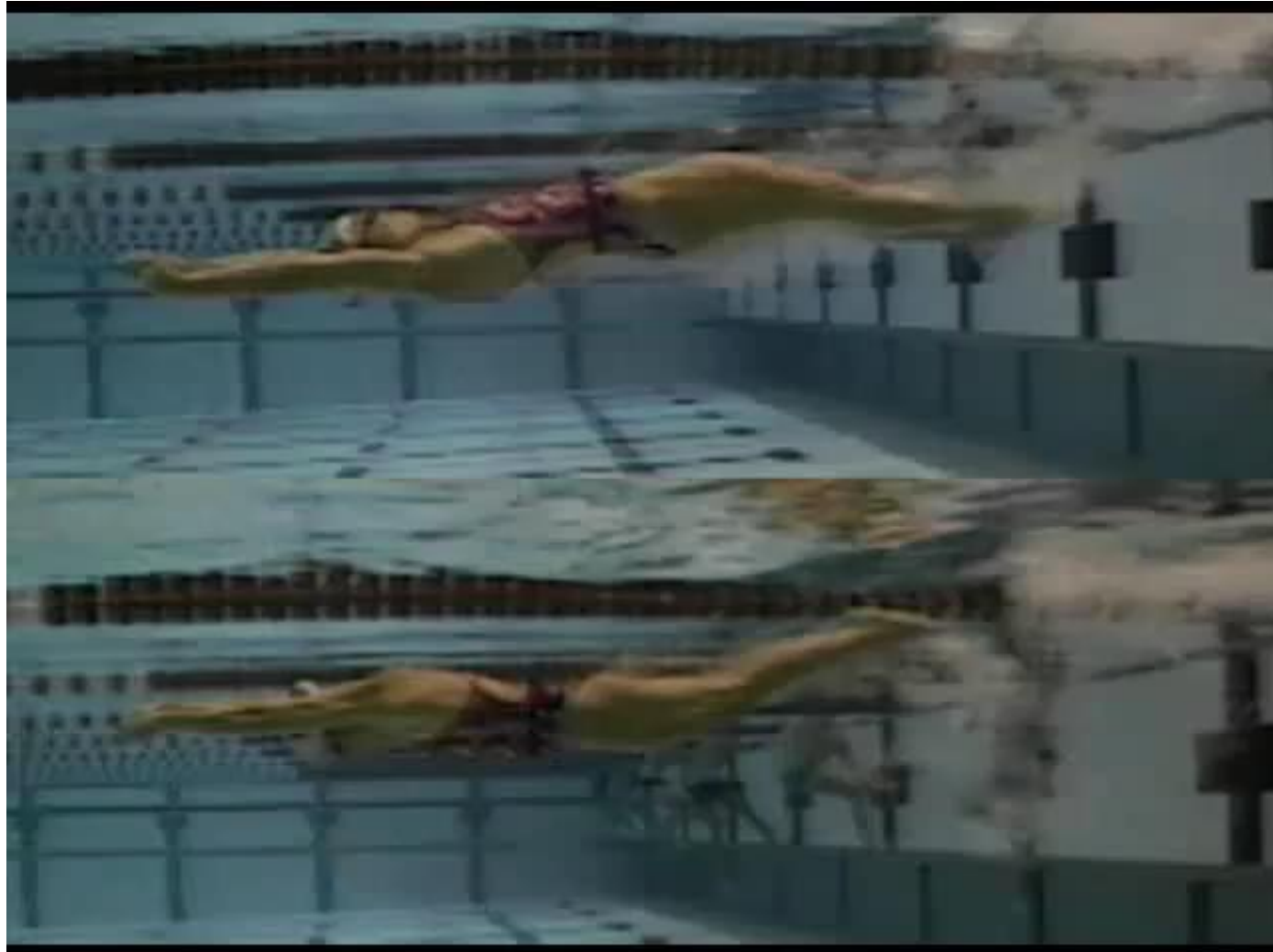
Each kick pushes the swimmer toward the surface

Many swimmers pop the hips too much in order to stay underwater (compromised technique)

Maintain best technique by controlling the depth with direction of the hands/arms



# Dolphin Kick: Back vs. Front



# Dolphin Kick: Race Stats

Male/Female, 100m back/fly:

Tempo: 0.40-0.50 seconds per kick

A tendency for the kick tempo to slow down approaching/during the breakout

	M 100 back	W 100 back	M 100 fly	W 100 fly
<b>15m start</b>	< 6.2 sec	< 7.0 sec	< 5.6 sec	< 6.5 sec
<b># kicks</b>	10-13 kicks	11-12 kicks	8-9 kicks	8-10 kicks
<b>15m turn</b>	< 7.0 sec	< 8.0 sec	< 7.6 sec	< 8.5 sec
<b># kicks</b>	10-12 kicks	10-12 kicks	?	?



# Additional Notes

Don't be concerned with size of the kick

Size probably dependent on leg length

Physical traits that help

Ankle flexibility

Mid-thoracic spine mobility

Low back flexibility

Hyperextended knees

Use it as a weapon late in the race more valuable than early in the race



# Additional Notes



# Dolphin Kick: Training

PRACTICE!! Repetition & Discipline

Practice movement hanging from pull bar or diving board

Use cones or other visual aid on bottom to set goal distance

Kickout sticks

Widths of pool

Kick for time (~6 seconds)



# Dolphin Kick: Training

Use drills/tools:

Fins/Monofins

Seaweed kicking

Vertical kicking – varying tempos

Resistance

Underwater at different parts length

Tempo Trainer/Metronome to teach frequency

Make it a game with younger swimmers –

Freeze tag using underwater dolphin





# Dolphin Kick: Training Sets

Use looser intervals so air is not the limiting factor

3 X 6 X 25 @ :45 (advancing to 3 X 8, 10, 12+)

6 - underwater with fins

6 - 15m underwater + 8m race swim with fins

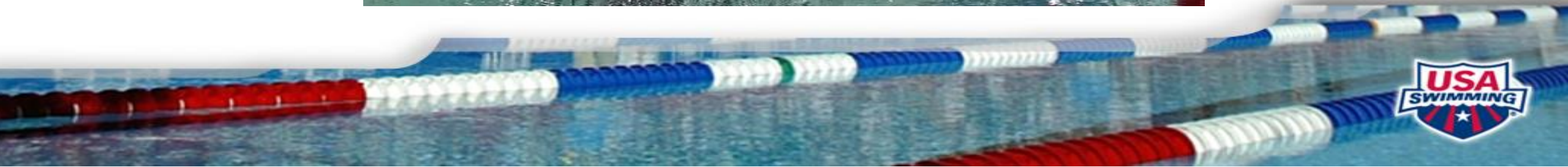
6 - 15m underwater + 8m race swim without fins

100's – 4 kicks off first wall, 5 off second, 6 off third, 7 off fourth

100's - #1 – 1 Kick off each wall, #2 – 2 kicks, etc. – see how many the whole GROUP can get



# Dolphin Kick Training: 10-10-10 Drill



# Dolphin Kick Training: Underwater Kickbacks

