








*Swimming Consultation and Technique Coaching*  
"Blending Art and Science"

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# Agenda

-  Wet suit vs. no wet suit
-  Stroke mechanics
-  Training tips
  -  Drills
  -  Workouts

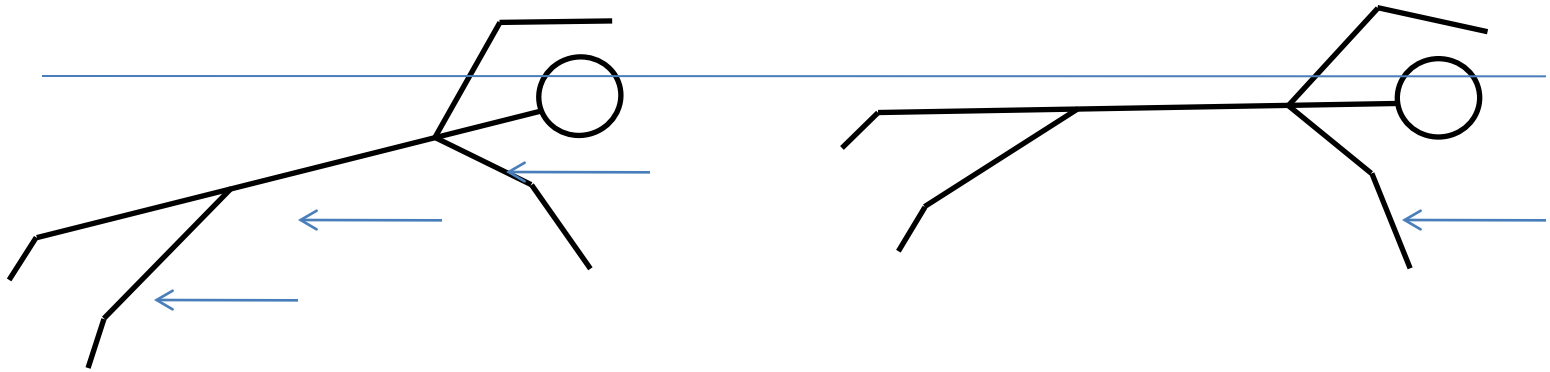


# Wet Suits

-  Horizontal Body Alignment
-  Temperature Regulation
-  Extra Buoyancy
-  Different muscles & 'mechanics'



# Body Alignment



## Enhanced Horizontal Alignment

- 12-14% reduction in drag (frictional and form) with wet suit use; this corresponds to a 5% faster performance for a constant effort and propelling efficiency (Toussaint et al, 1989)
- Can alter energy costs by 6% (Lavoie et al, 1990)
  - The degree of body inclination is the main determinant of energy cost regardless of gender or skill (Capelli et al 1995)



# Temperature

You can and will get overheated in a wet suit if the water temperature is too high

You can and will get hypothermic if the water temperature is too cold

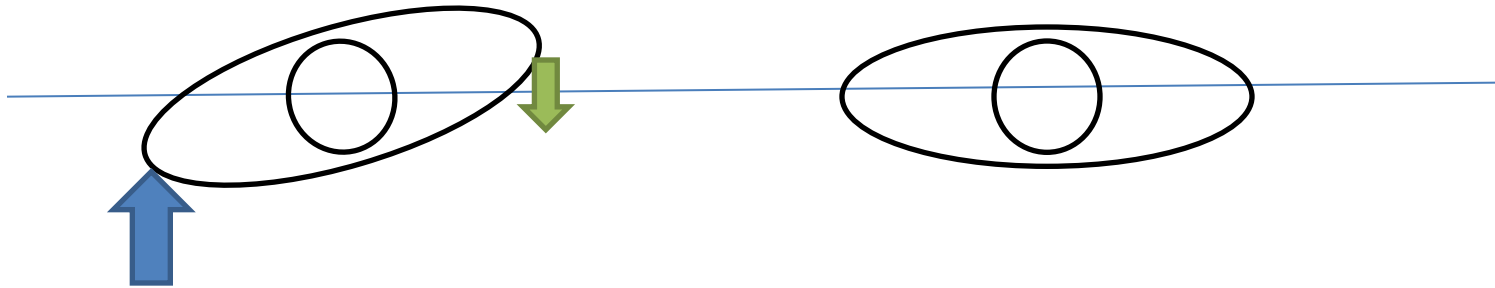
Weigh your own risks:

- 🥽 Buoyancy factor
- 🥽 Distance
- 🥽 Level of effort
- 🥽 Water temperature & condition



# Extra Buoyancy

Induces mechanical “constraints” which amplify “catch-up” coordination – with no modifications in stroke rate, recovery, or leg movements (Hue et al, 2003)

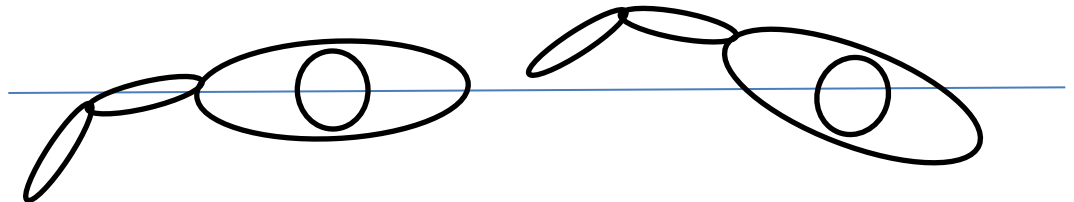
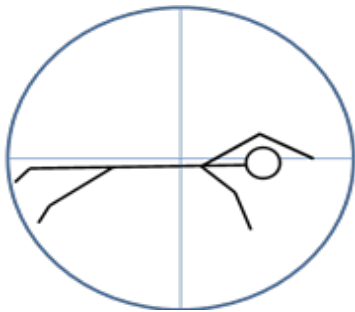


- 🕒 “Catch-up” coordination reduces body roll
- 🕒 Body Roll in turn affects hand speed and hand path:  
An increase in body roll increases hand velocity and medial hand motion (Payton, 1997; Prichard, 1993)




# Stroke Mechanics

- 👓 Increase your hip initiated body roll
  - 🏊 Restores “front quadrant” coordination pattern
  - 🏊 Increases availability of breathing time
  - 🏊 Lessens resistance against wet suit on shoulders



# Stroke Mechanics


## Palms

-  Direction of palms can be altered to account for a wake or current since the extra buoyancy negates the need to generate extra lift

## Remember to kick

-  Keeping your toes in a constant position of plantar flexion could cause cramping in your calves

## Sighting

-  Lift only your chin or look on the breath to minimize changes in streamline position and body alignment



# Training Tips: Drills

## Eyes closed

-  Direction of palms

-  Mimicry

## Tarzan

-  Increase your kick

-  Increase your body roll

## Fins (full blade)

-  Generate lift

-  Force arm turn over

-  Retain all components of stroke



# Training Tips: Workouts

 Increase core stability training

 v-up kicking

 Turn before the walls

 flags are 5m out

 perimeters

 Start from the middle of the pool


 Sprint 50s

 12.5, 25, 50, 25, 12.5



# Training Tips: Workouts

## Time Intervals vs. Rest Intervals

 Sprint a 100 then add 20 seconds to your time


 Stay close to your interval regardless of intensity level

## Fatigue & perceived level of exertion

## Coordination at variable speeds

## Goal Time & Awareness

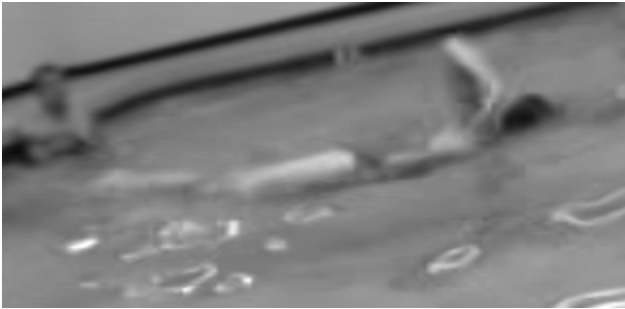
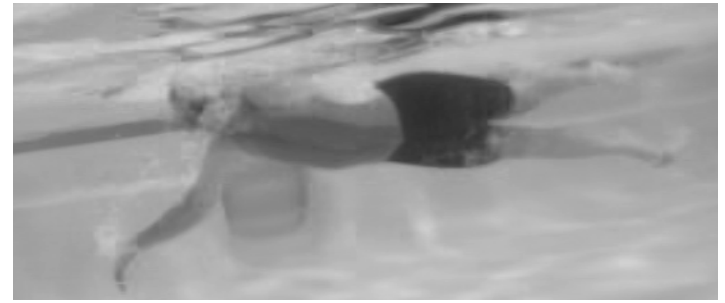
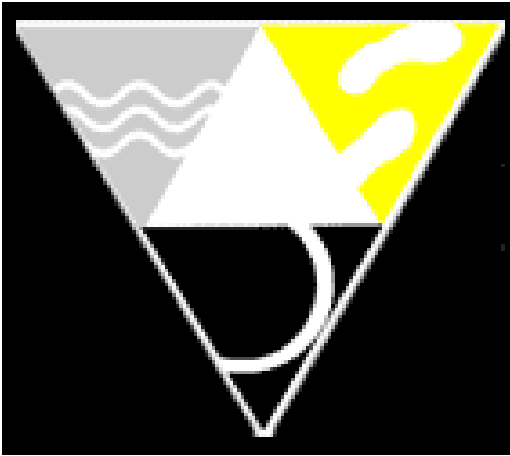
 Total time / Total distance

 Drop an interval? Rest 1 and Resume



Questions?





Thanks!



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