



# Freestyle

## *Arm Stroke*

Russell Mark

National Team Division

High Performance Consultant



# Russell's Perspective

- Observe and gather info
- Teaching progression
- Freestyle- the most complex technique topic
- Arm stroke vs. Pull
- Principle concept that drives the technique
  - To move forward, push water back
  - Apply direct force
  - Not lateral movements: side-to-side, S-shape pull



# Scope of Clinic

- Arm Mechanics!
  - Catch
  - Width of stroke
  - Finish
  - Recovery
  - Hand/arm entry
- Everything else – related and important!
  - Body/Head position
  - Rotation (hips, shoulders, pivoting)
  - Kicking
  - Breathing



# The Catch



- Some degree of elbow bend so that:
  - Fingers point down
  - Forearm is pitched downward (vertical)
  - The arm “hooks” the water
- Maximizes surface area to push water back



# The Variations



- Sharper elbow bend
- Move more water back
- More efficient
- Longer to set-up (generally)
- Wider pull
- More distance-driven



- Less elbow bend
- Less water moved back
- Quicker to get into from entry
- More power
- More narrow pull
- More sprint-driven



# Good Catch / Pull

- Extends in front of shoulder or slightly wider
- Hand path stays at shoulder width and traces the side of the body
- Elbow is wider than the hand
- Some rotation at the time of the catch



# The Variations



- Much wider
- More catch-up timing
- Entry -> Extension -> Catch
- Less rotation at catch

- More narrow
- Deeper catch / pull
- Catch continues from entry
- More rotation at catch



# The Finish

- After passing the shoulder:
  - Maintain pressure on forearm and palm
  - Start releasing water / leading with the elbow
- Hands sometimes go narrow -> due to rotation
- Don't over-do the finish
  - Can compromise the catch and/or shoulder
  - Keep forearm and palm pushing water back, not up
- More sprinters will be seen with “flick” finish but that's more of a product of transitioning to the recovery quickly (higher tempo)





# The Recovery

- A controlled throw of the hand
- Traditional crawl recovery
  - Arm to the side
  - Hinged at the elbow, Led by the hand
  - Driving / rotating arm forward throughout
- Open recovery
  - Arm to the side
  - Hand is high at peak / middle of the recovery
  - Initially created from dynamic transition from finish
  - Drive hand / body forward & down
- Not a narrow recovery with hand close to body line



# The Recovery

## A Three-Dimensional Motion

1. Arm lifts up & Drives in(to water)
2. Swings to the side
3. Drives FORWARD! Dynamic motion!
  - Recovery arm shoulder shifts/rolls forward
  - Pulling arm shoulder shifts/rolls back



# The Connection

- The recovery arm and pulling arm **HAVE TO** work together!!
- Connected through the **CORE**
- Pulling arm is always still in water when other arm enters
  - Sprinters and Distance swimmers
  - Pulling arm propels water back and body forward, but also drives recovery arm forward
  - Finish supports extension (distance) or entry (sprint)



# The Entry

- Dynamic
- Always a forward-shifting component
- From traditional crawl recovery:
  - Hands / arm extend forward
  - Enter above head, just inside shoulder width
  - Palm pitched downward, maybe slight outward
- From open recovery
  - More downward attack on water
  - Arm extended, in line with shoulder
  - Palm pitched down, fingertips down



# Additional Resources

- The Race Club ([www.theraceclub.net](http://www.theraceclub.net))
- GoSwim ([www.goswim.tv](http://www.goswim.tv))
- Mike Bottom – Three Styles of Freestyle
- YouTube



# For more information:

- Tips & Training
- High Performance Tips

Contact Us | My Deck Pass | Sign In

SEARCH

HOME ABOUT MEMBER RESOURCES TIPS & TRAINING EVENTS TIMES NEWS NATIONAL TEAM OLYMPIC TRIALS FOUNDATION

### TIPS & TRAINING

- High Performance Tips
- In-Water Training Videos
- Coaches In The Know Videos
- ▶ Strength & Conditioning
- ▶ Nutrition Center
- Psychology of Swimming
- Injury Prevention
- ▶ Doping Control

### DIGITAL SPLASH

The Digital Edition of the March-April 2012 issue of Splash is now available online and as a mobile app for your iPad and iPhone. In this issue we offer some Technique Tips for the 50 Freestyle.

[READ SPLASH NOW!](#)

### USA SWIMMING RSS FEED

Subscribe to USA Swimming's RSS (Really Simple Syndication) feeds to get news delivered right to your desktop.

[LEARN MORE](#)

### STAY CONNECTED

USA Swimming publishes customized e-mail newsletters for parents, swimmers and coaches each month. Get exclusive offers, insider tips and more, delivered right to your inbox.

[LEARN MORE](#)

### T-SHIRTS

### JACKETS

### BOOKS & DVDs

### BAGS

### SWEATSHIRTS

### MEET SUPPLIES

*WE POSSESS SUPER-HERO POWERS*

### HIGH PERFORMANCE TIPS

- IN-WATER TRAINING VIDEOS
- COACHES IN THE KNOW VIDEOS
- STRENGTH & CONDITIONING
- NUTRITION CENTER
- PSYCHOLOGY OF SWIMMING
- INJURY PREVENTION
- DOPING CONTROL

### FEATURED ARTICLE

5/20/2013 World Performance Comparison: Is the U.S. Ready?

As we approach World Championship Trials next month, it seems like a good time to take a look at what the rest of the world has been up to in 2013.

[READ MORE](#)

### FEATURED ARTICLE

5/13/2013 Following Routine: Should I Do a Wake-Up Swim?

With the summer championship meets just around the corner, a lot of athletes and coaches are working to finalize the details of their race-day plans. While there is something to be said about the calm and confidence that can be gained through following a routine, the ability to be flexible and adapt to situations is something that gives elite athletes an edge.

[READ MORE](#)

### LONG AXIS STROKES: FREESTYLE AND BACKSTROKE

- 03/26/2013 Backstroke Hand Entries
- 02/25/2013 Women's Freestyle Tempos
- 02/19/2013 Men's Freestyle Stroke Tempos
- 12/17/2012 Six-Beat Kicking a Distance Race
- 12/10/2012 1500 Freestyle: How the Best Swims It

[MORE NEWS](#)

### SHORT AXIS STROKES: BREASTSTROKE AND BUTTERFLY

- 01/22/2013 Butterfly Breathing Patterns
- 11/26/2012 Breaststroke: Learn to Tempo Up
- 10/22/2012 Breaststroke: Command Your Tempo
- 05/29/2012 Butterfly: Pull Pattern
- 03/19/2012 Butterfly: Press Forward, Not Down

[MORE NEWS](#)

### SKILLS: STARTS, TURNS, DOLPHIN KICK, FINISHES

- 11/05/2012 Butterfly Breakouts: Think Out, Not Up
- 10/15/2012 Turns: Foot Placement on the Wall