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)
- GoSwim (www.goswim.tv)
- Mike Bottom – Three Styles of Freestyle
- YouTube
For more information:

- Tips & Training
- High Performance Tips