



# IMPROVING SWIMMING TECHNIQUE

**ESSENTIAL CUES FOR FAST AND  
INJURY-FREE SWIMMING**

**BY ROD HAVRILUK, PH.D.**



## **IMPROVING SWIMMING TECHNIQUE: ESSENTIAL CUES FOR FAST AND INJURY-FREE SWIMMING**

*Swimming is a skill sport that requires an individual to master very specific movements in order to swim safely and effectively. Every day, the STR team of professionals evaluates swimmers' technique and makes suggestions that will prevent injury (or further injury!) and/or improve the effectiveness of some aspect of their performance. Over the years, STR has worked with thousands of swimmers at every ability level from beginners to Olympians. That extensive experience (as well as our approach to working with swimmers, coaches, and parents) is the basis for this product.*

### **Why cues?**

A cue specifies the position or motion of a body part. For example, feeling the water level at the hairline can help to effectively position the head for freestyle.

Most swimming cues are either visual (feedback that you can see) or kinesthetic (feedback that you can feel). When there is the option of using visual or kinesthetic information, athletes typically will control motion better when applying visual information. However, about three-fourths of the stroke cycle is out of the swimmer's view. Consequently, swimmers must generally rely on kinesthetic feedback - i.e. what they feel at a certain point in the stroke. For example, at the end of the push phase in freestyle, touching the thigh with the thumb will help to determine the exact position of the hand with respect to the leg.

### **How can cues improve technique?**

Each of the following pages feature images that show the front and side views for the four critical positions within the cycle of each competitive stroke. The cues associated with each position are intended to help determine *actual* position in relation to *optimal* position during each phase of a stroke. This information can:

- provide swimmers and coaches with a easy-to-use method of evaluation
- give the swimmer specific measurement tools for self-monitoring
- improve communication by developing a standard language for technique
- generate a better understanding of the physical requirements of effective technique

### **How do I use the cue cards?**

Although it will be helpful to review this information in any format, you may find it most effective to print these cue cards and bring them to the pool with you. (You may want to laminate to protect from the inevitable splash!) The cues can be discussed, simulated on dry land, and used at both training and competitive speeds. As with many types of skill instruction, slow, deliberate practice is recommended until the particular skill (movement) feels automatic. (For more on this aspect of training, you may want to check out the following terms: automaticity, deliberate practice, and acceleration strategies.) Evaluate progress by determining which positions are achieved, using the cues to measure success. Keep in mind that some skills may take longer to master and will be more difficult to maintain as stroke rate is increased.

**DOWNLOAD A FREE "CUE CHECKLIST" TO RECORD YOUR PROGRESS AT [SWIMMINGTECHNOLOGY.COM](http://SWIMMINGTECHNOLOGY.COM).**

## BUTTERFLY

As you complete your arm entry, straighten your arms in front of and below the shoulders.



When not breathing, keep your head motionless with the water level at the top of the head.



As you begin your pull, bend your elbows so your hands pass directly beneath your shoulders.



On the kick upbeat, keep your feet submerged so only your heels break the surface.



When breathing, keep your chin underwater.



As you complete your push phase, touch the front of your thighs with your thumbs.



As your arms recover, keep your thumbs just above the water.



As your arms recover, keep your elbows higher than your hands.



## About the Author

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Dr. Havriluk has a Ph.D. in human performance and an M.S. in exercise physiology. He taught biomechanics at Indiana University and was most recently an adjunct professor at Florida State University. He coached swimming at all levels – from age group to NCAA Division I. As a sport scientist, Rod has worked with thousands of swimmers, from beginners to world record holders. Rod serves on the Advisory Board of the Counsilman Center for the Science of Swimming at Indiana University; the Editorial Board of the *Journal of Swimming Research*; and the Review Board for numerous scientific journals. His primary research areas are technique, skill learning, and injury prevention. He has presented at numerous scientific and coaching conferences and his articles have appeared in both theoretical and applied publications. He currently works with coaches, teams and individual swimmers in more than two dozen countries.

You can learn more about Dr. Havriluk and download his latest research at [swimmingtechnology.com](http://swimmingtechnology.com).

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