TESTING THE WATERS (Part II)
By Wayne Goldsmith

Check out the April issue of Swimming World Magazine to read the article, "Testing the Waters (Part I)," by Wayne Goldsmith. You'll discover that coaches and sports scientists often use testing to determine whether or not their swimmers are getting fitter and faster and are on the right path to performing their best. You'll also learn the basic principles of testing and how to set up a basic test recording sheet.

Following is Part II of the article, which provides specific tests for speed, speed endurance and endurance:

Why test?
Testing provides valuable information to you and your coach on your progress of the effectiveness of your training program. It helps to identify areas of your program that need to be changed and modified as you work toward achieving your swimming goals.

Who to test?
Anyone can be tested. Some people shy away from testing early in their swimming career because they are afraid the results may not be very good. Actually, the best time to be tested is early in your career because this is the time when you are likely to make your biggest improvements, and progress is really motivating!

When to test?
Generally, the best time to be TESTED is when you are RESTED. This allows the test to measure your improvement without the influence of fatigue.

Which test to do?
It depends on what you are trying to measure. Let's look at three popular and widely used swimming tests:

1. **TEST FOR SPEED**

   The test: 2 x 25 meters, push start on 2:30

   You will need:

   o 25 meter pool
   o Test recording sheet (see the April issue of Swimming World Magazine for a sample of a basic test recording sheet)
   o Stopwatch
o A friend to help you record the information

Test protocol:

o Start in the water.
o Push off and swim 25 meters at maximum speed.
o A friend or teammate records time and stroke count (and stroke rate if available).

Analysis:

o Time
o Number of strokes per lap
o Average of the two 25s
o Difference between the two 25s

What you will learn:

o This test is a good basic test of pure speed. Taking the dive out means you are assessing swimming speed rather than diving technique.

As you improve:

o The 25s will get faster (improved speed)
o You will be able to swim at maximum speed with fewer strokes (improved stroke efficiency/technique)
o There will be little or no difference between them (improved speed endurance)
o You will be able to swim faster with fewer (ideally no) breaths per 25 (improved skill and tactical ability)

Variations:

o Count breaths--we know that the best freestyle and fly swimmers in the world can swim at maximum speed with only two or less breaths over a 50 meter sprint.

2. TEST FOR SPEED ENDURANCE

The test: 6 x 50 meters, push start on 2:00

You will need:

o 50 meter pool (if possible)
o Test recording sheet
o Stopwatch
o A friend to help you record the information

Test protocol:

o Start in the water.
o Push off and swim 50 meters at maximum speed.
o A friend or teammate records time and stroke count (and stroke rate if available).

Analysis:

o Time
o Number of strokes per lap/stroke rate if available
o Average of the six 50s
o Difference between the fastest and slowest 50
o RPE (Rating of Perceived Exertion)

What you will learn:

o The key to this test is to aim to swim at maximum speed right from the first 50. Then try to swim as fast as possible until you have completed all six. This is important because the test is trying to measure your “fatigue resistance” by looking at your ability to repeat maximum and near maximum speed swims.

As you improve:

o The 50s will get faster (improved speed)
o The average will get lower (improved speed endurance)
o The difference between the fastest and slowest will reduce (improved speed endurance and endurance)
o You will be able to maintain good technique and skills as you get tired (improved speed endurance, technique and endurance)

Variations:

o In fly, try breathing every four or five strokes.
o Experiment with underwater start distances (up to a maximum of 15 meters) to see what works for you.

3. TEST FOR ENDURANCE
The test: 7 x 200 freestyle, push start on 5 minutes, aiming to achieve a target pace of:
1st 200--PERSONAL BEST TIME PLUS 35 SECONDS
2nd 200--PERSONAL BEST TIME PLUS 30 SECONDS
3rd 200--PERSONAL BEST TIME PLUS 25 SECONDS
4th 200--PERSONAL BEST TIME PLUS 20 SECONDS
5th 200--PERSONAL BEST TIME PLUS 15 SECONDS
6th 200--PERSONAL BEST TIME PLUS 10 SECONDS
7th 200--PERSONAL BEST TIME PLUS 5 SECONDS

You will need:

- 50 meter pool (if possible)
- Test recording sheet
- Stopwatch
- A friend to help you record the information

Test protocol:

- Start in the water.
- Push off and swim 200 meters at the TARGET SPEED.
- A friend or teammate records time, splits and stroke count (and stroke rate if available), heart rate and other variables.

Analysis:

- Time
- Splits
- Stroke count on the final 50 every 200 repeat
- Heart rate at the end of each 200
- RPE (Rating of Perceived Exertion)

What you will learn:

- This test is pretty much a universal test for endurance. It is called a STEP TEST because the speed increases in “steps” and you measure how the body is responding at each step.

As you improve:

- The target paces will get faster (improved endurance)
- Your heart rate will be lower at the same speed (improved endurance)

Variations:
If you need more time to achieve the target pace of each 200, try 7 x 200 on 6 minutes.

Regardless of the test you use, remember the three GOLDEN RULES. Read what they are in the April issue of Swimming World Magazine. And remember: nobody wins the gold medal by having the best test! Testing is simply a guide to give you feedback on the progress of your training and where you are in relation to achieving a specific goal.