## Review of Lesson 5

Freestyle warm up - 3 Laps - Focus on Rotation
Review Streamlining and Open Turns

## Review of Tool Use

Fins: Use the fins to provide momentum for the fundamental hand-lead side-lying breathing drill. Make sure you are perfectly balanced as you learn to breathe with your head as deep as possible in the water. Later, use the fins to swim a little faster than you normally swim; try to feel where the drag increases, and try to figure out how to minimize that increased drag.

## Kicking: The Two-Beat Kick

For most people, this is the last component of endurance freestyle stroke technique to master. Try to get the feel for the two-beat kick by kicking as little as possible. Swim very, very, slowly, and when you are rotated completely onto your side, try to kick with your bottom leg to initiate body rotation. It does not take a hard kick. Try this with and without fins. For some people, "leaning" on the fins helps to learn the two-beat kick; for others, the fins feel "too heavy" to get the two-beat kick working. Be patient, everybody gets it eventually.

## Counting Strokes

Your stroke count or SPL (strokes per length) is the number of times your hand hits the water as you swim one length. The underwater pull-out from your streamline or open turn doesn't count.

- Your SPL is generally a pretty good measure of efficiency - the fewer strokes, the more efficient you are.
- As you tire, your SPL will increase (usually meaning you are losing form)
- As you increase your speed, your SPL will increase (meaning you are trading speed for efficiency)


## Conceptual Focus Points

If you know you are doing something wrong, try to correct it using a conceptual focus point rather than getting too focused on a body part. Good conceptual focus points include the following:

- Swim downhill
- Swim with a rollerblade or cross-country skiing rhythm
- Swim through a small pipe
- Swim quietly
- Sneak through the water


## Underwater Video: Freestyle (will review at end of lesson)

Where to Go from Here...

## Build to an 800-yard Distance at Race Pace

Before starting, select a pace at which you can comfortably swim a single lap. Note your time and your stroke count. Try to maintain that pace and stroke count for all repeats in the set.

This is a progression done over multiple workouts. Work your way through the steps, repeating one step once or twice per workout, until you can easily maintain your pace at that step. You should have adequate rest between each repeat (5 bobs, for example), so that you can maintain your pace and stroke count on each subsequent repeat. When you can complete all repeats at the same pace and stroke count, lower your pace by one or two seconds (or more if the last step was much too easy!), and begin over with Step 1.

| Step | $\mathbf{2 5 - Y a r d ~ P o o l ~}$ | $\mathbf{2 0 - Y a r d ~ P o o l ~}$ |
| :---: | :--- | :--- |
| $\mathbf{1}$ | $16 \times 1$ Lap | $20 \times 1$ Lap |
| $\mathbf{2}$ | $8 \times 2$ Laps | $10 \times 2$ Laps |
| $\mathbf{3}$ | $4 \times 4$ Laps | $5 \times 4$ Laps |
| $\mathbf{4}$ | $2 \times 8$ Laps | $2 \times 10$ Laps |
| $\mathbf{5}$ | $1 \times 16$ Laps | $1 \times 20$ Laps |

Note: Remember to always select a focus point - it can vary from repeat to repeat, but don't swim any laps without focusing on some aspect of your stroke. Conceptual points are better.

Swimming Pace for 25-Yard Pool

| Laps | 1 | 2 | 4 | 8 | 16 | 33 | 36 | 43 | 85 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Yards | 50 | 100 | 200 | 400 | 800 | 1650 | 1800 | 2150 | 4250 |
| Time | 1:10 | 2:20 | 4:40 | 9:20 | 18:40 | 38:30 | 42:00 | 50:10 | 1:39:10 |
|  | 1:09 | 2:18 | 4:36 | 9:12 | 18:24 | 37:57 | 41:24 | 49:27 | 1:37:45 |
|  | 1:08 | 2:16 | 4:32 | 9:04 | 18:08 | 37:24 | 40:48 | 48:44 | 1:36:20 |
|  | 1:07 | 2:14 | 4:28 | 8:56 | 17:52 | 36:51 | 40:12 | 48:01 | 1:34:55 |
|  | 1:06 | 2:12 | 4:24 | 8:48 | 17:36 | 36:18 | 39:36 | 47:18 | 1:33:30 |
|  | 1:05 | 2:10 | 4:20 | 8:40 | 17:20 | 35:45 | 39:00 | 46:35 | 1:32:05 |
|  | 1:04 | 2:08 | 4:16 | 8:32 | 17:04 | 35:12 | 38:24 | 45:52 | 1:30:40 |
|  | 1:03 | 2:06 | 4:12 | 8:24 | 16:48 | 34:39 | 37:48 | 45:09 | 1:29:15 |
|  | 1:02 | 2:04 | 4:08 | 8:16 | 16:32 | 34:06 | 37:12 | 44:26 | 1:27:50 |
|  | 1:01 | 2:02 | 4:04 | 8:08 | 16:16 | 33:33 | 36:36 | 43:43 | 1:26:25 |
|  | 1:00 | 2:00 | 4:00 | 8:00 | 16:00 | 33:00 | 36:00 | 43:00 | 1:25:00 |
|  | :59 | 1:58 | 3:56 | 7:52 | 15:44 | 32:27 | 35:24 | 42:17 | 1:23:35 |
|  | :58 | 1:56 | 3:52 | 7:44 | 15:28 | 31:54 | 34:48 | 41:34 | 1:22:10 |
|  | :57 | 1:54 | 3:48 | 7:36 | 15:12 | 31:21 | 34:12 | 40:51 | 1:20:45 |
|  | :56 | 1:52 | 3:44 | 7:28 | 14:56 | 30:48 | 33:36 | 40:08 | 1:19:20 |
|  | :55 | 1:50 | 3:40 | 7:20 | 14:40 | 30:15 | 33:00 | 39:25 | 1:17:55 |
|  | :54 | 1:48 | 3:36 | 7:12 | 14:24 | 29:42 | 32:24 | 38:42 | 1:16:30 |
|  | :53 | 1:46 | 3:32 | 7:04 | 14:08 | 29:09 | 31:48 | 37:59 | 1:15:05 |
|  | :52 | 1:44 | 3:28 | 6:56 | 13:52 | 28:36 | 31:12 | 37:16 | 1:13:40 |
|  | :51 | 1:42 | 3:24 | 6:48 | 13:36 | 28:03 | 30:36 | 36:33 | 1:12:15 |
|  | :50 | 1:40 | 3:20 | 6:40 | 13:20 | 27:30 | 30:00 | 35:50 | 1:10:50 |
|  | :49 | 1:38 | 3:16 | 6:32 | 13:04 | 26:57 | 29:24 | 35:07 | 1:09:25 |
|  | :48 | 1:36 | 3:12 | 6:24 | 12:48 | 26:24 | 28:48 | 34:24 | 1:08:00 |
|  | :47 | 1:34 | 3:08 | 6:16 | 12:32 | 25:51 | 28:12 | 33:41 | 1:06:35 |
|  | 46 | 1:32 | 3:04 | 6:08 | 12:16 | 25:18 | 27:36 | 32:58 | 1:05:10 |
|  | :45 | 1:30 | 3:00 | 6:00 | 12:00 | 24:45 | 27:00 | 32:15 | 1:03:45 |
|  | 44 | 1:28 | 2:56 | 5:52 | 11:44 | 24:12 | 26:24 | 31:32 | 1:02:20 |
|  | :43 | 1:26 | 2:52 | 5:44 | 11:28 | 23:39 | 25:48 | 30:49 | 1:00:55 |
|  | 42 | 1:24 | 2:48 | 5:36 | 11:12 | 23:06 | 25:12 | 30:06 | 59:30 |
|  | :41 | 1:22 | 2:44 | 5:28 | 10:56 | 22:33 | 24:36 | 29:23 | 58:05 |
|  | 40 | 1:20 | 2:40 | 5:20 | 10:40 | 22:00 | 24:00 | 28:40 | 56:40 |
|  | :39 | 1:18 | 2:36 | 5:12 | 10:24 | 21:27 | 23:24 | 27:57 | :55:15 |
|  | :38 | 1:16 | 2:32 | 5:04 | 10:08 | 20:54 | 22:48 | 27:14 | 53:50 |
|  | :37 | 1:14 | 2:28 | 4:56 | 9:52 | 20:21 | 22:12 | 26:31 | 52:25 |
|  | :36 | 1:12 | 2:24 | 4:48 | 9:36 | 19:48 | 21:36 | 25:48 | 51:00 |
|  | :35 | 1:10 | 2:20 | 4:40 | 9:20 | 19:15 | 21:00 | 25:05 | :49:35 |
| Yards | Approximate Distances for Triathlon Swim Legs |  |  |  |  |  |  |  |  |
| 400-800 | 1/4 to $1 / 2$ mile - common sprint distances |  |  |  |  |  |  |  |  |
| 1650 | Olympic distance (1500 meters = 1640.42 yards) |  |  |  |  |  |  |  |  |
| 2150 | Half Iron Distance ( 1.2 miles = 2112 yards) |  |  |  |  |  |  |  |  |
| 4250 | Iron Distance (2.4 miles $=4224$ yards) |  |  |  |  |  |  |  |  |


| Swimming Pace for 20-Yard Pool |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Laps | 1 | 2 | 5 | 10 | 20 | 42 | 44 | 53 | 106 |
| Yards | 40 | 80 | 200 | 400 | 800 | 1680 | 1760 | 2120 | 4240 |
| Time | 1:00 | 2:00 | 5:00 | 10:00 | 20:00 | 42:00 | 44:00 | 53:00 | 1:46:00 |
|  | :59 | 1:58 | 4:55 | 9:50 | 19:40 | 41:18 | 43:16 | 52:07 | 1:44:14 |
|  | :58 | 1:56 | 4:50 | 9:40 | 19:20 | 40:36 | 42:32 | 51:14 | 1:42:28 |
|  | :57 | 1:54 | 4:45 | 9:30 | 19:00 | 39:54 | 41:48 | 50:21 | 1:40:42 |
|  | :56 | 1:52 | 4:40 | 9:20 | 18:40 | 39:12 | 41:04 | 49:28 | 1:38:56 |
|  | :55 | 1:50 | 4:35 | 9:10 | 18:20 | 38:30 | 40:20 | 48:35 | 1:37:10 |
|  | :54 | 1:48 | 4:30 | 9:00 | 18:00 | 37:48 | 39:36 | 47:42 | 1:35:24 |
|  | :53 | 1:46 | 4:25 | 8:50 | 17:40 | 37:06 | 38:52 | 46:49 | 1:33:38 |
|  | :52 | 1:44 | 4:20 | 8:40 | 17:20 | 36:24 | 38:08 | 45:56 | 1:31:52 |
|  | :51 | 1:42 | 4:15 | 8:30 | 17:00 | 35:42 | 37:24 | 45:03 | 1:30:06 |
|  | :50 | 1:40 | 4:10 | 8:20 | 16:40 | 35:00 | 36:40 | 44:10 | 1:28:20 |
|  | :49 | 1:38 | 4:05 | 8:10 | 16:20 | 34:18 | 35:56 | 43:17 | 1:26:34 |
|  | :48 | 1:36 | 4:00 | 8:00 | 16:00 | 33:36 | 35:12 | 42:24 | 1:24:48 |
|  | :47 | 1:34 | 3:55 | 7:50 | 15:40 | 32:54 | 34:28 | 41:31 | 1:23:02 |
|  | :46 | 1:32 | 3:50 | 7:40 | 15:20 | 32:12 | 33:44 | 40:38 | 1:21:16 |
|  | :45 | 1:30 | 3:45 | 7:30 | 15:00 | 31:30 | 33:00 | 39:45 | 1:19:30 |
|  | :44 | 1:28 | 3:40 | 7:20 | 14:40 | 30:48 | 32:16 | 38:52 | 1:17:44 |
|  | :43 | 1:26 | 3:35 | 7:10 | 14:20 | 30:06 | 31:32 | 37:59 | 1:15:58 |
|  | :42 | 1:24 | 3:30 | 7:00 | 14:00 | 29:24 | 30:48 | 37:06 | 1:14:12 |
|  | :41 | 1:22 | 3:25 | 6:50 | 13:40 | 28:42 | 30:04 | 36:13 | 1:12:26 |
|  | :40 | 1:20 | 3:20 | 6:40 | 13:20 | 28:00 | 29:20 | 35:20 | 1:10:40 |
|  | :39 | 1:18 | 3:15 | 6:30 | 13:00 | 27:18 | 28:36 | 34:27 | 1:08:54 |
|  | :38 | 1:16 | 3:10 | 6:20 | 12:40 | 26:36 | 27:52 | 33:34 | 1:07:08 |
|  | :37 | 1:14 | 3:05 | 6:10 | 12:20 | 25:54 | 27:08 | 32:41 | 1:05:22 |
|  | :36 | 1:12 | 3:00 | 6:00 | 12:00 | 25:12 | 26:24 | 31:48 | 1:03:36 |
|  | :35 | 1:10 | 2:55 | 5:50 | 11:40 | 24:30 | 25:40 | 30:55 | 1:01:50 |
|  | :34 | 1:08 | 2:50 | 5:40 | 11:20 | 23:48 | 24:56 | 30:02 | 1:00:04 |
|  | :33 | 1:06 | 2:45 | 5:30 | 11:00 | 23:06 | 24:12 | 29:09 | :58:18 |
|  | :32 | 1:04 | 2:40 | 5:20 | 10:40 | 22:24 | 23:28 | 28:16 | :56:32 |
|  | :31 | 1:02 | 2:35 | 5:10 | 10:20 | 21:42 | 22:44 | 27:23 | :54:46 |
|  | :30 | 1:00 | 2:30 | 5:00 | 10:00 | 21:00 | 22:00 | 26:30 | 53:00 |
|  | :29 | :58 | 2:25 | 4:50 | 9:40 | 20:18 | 21:16 | 25:37 | :51:14 |
|  | :28 | :56 | 2:20 | 4:40 | 9:20 | 19:36 | 20:32 | 24:44 | :49:28 |
|  | :27 | :54 | 2:15 | 4:30 | 9:00 | 18:54 | 19:48 | 23:51 | :47:42 |
|  | :26 | :52 | 2:10 | 4:20 | 8:40 | 18:12 | 19:04 | 22:58 | :45:56 |
|  | :25 | :50 | 2:05 | 4:10 | 8:20 | 17:30 | 18:20 | 22:05 | :44:10 |
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