

Strength Training for Scullers

Will Ruth

BS, MA, NSCA-CSCS

Craftsbury Weekly Webinars

August 12, 2020

Webinar Goals

#1: What physical performance differences exist for sculling and for different race distances?

#2: How to make your own strength training adjustments for sculling and different goals: technique, longevity, sprint/distance race performance.

Assumptions of This Webinar

Training

You are currently strength training and/or have experience and SOME equipment

You are primarily strength training to improve your sculling abilities (tech. OR perf.)

Health

You are currently healthy or at least “know your limits”

You should consult a PT/medical pro for questions about specific injuries/ailments

The material presented today is general and cannot be individually prescriptive and does not seek to cure any injuries/ailments

Erg vs. Scull vs. Sweep: Part 1



Source: Concept2.com



Source: WintechRacing.com



Source: BritishRowing.org

Erg vs. Scull vs. Sweep: Part 2



Source: Concept2.com



Source: GreenRacingProject.com

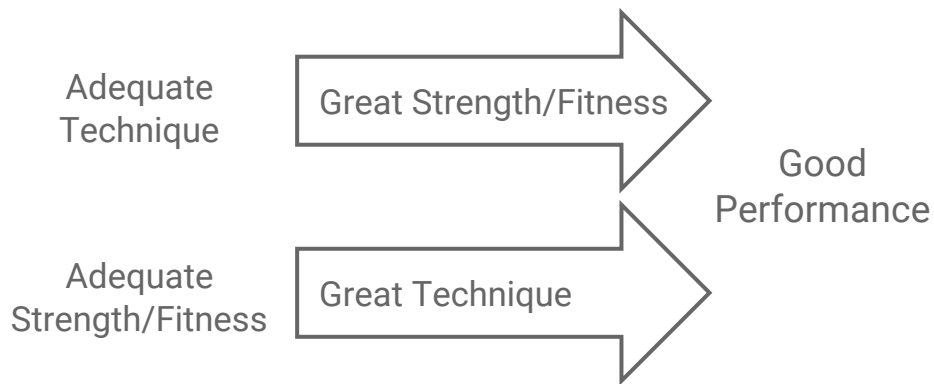


Source: Row2k.com

Needs Analysis:

What Makes a Good/Great Sculler?

- Fitness
 - Aerobic for 2km+ performance and recovery
 - Anaerobic for <2km performance, sprint, start
- Strength
 - Enough so that race pace is submaximal
 - Increase Strength → Decrease Per-Stroke Effort → Improve Submax Endurance and Performance
- Technique
 - Boat-dependent
- Experience



Needs Analysis:

Specific Injury Risks

Is sculling healthier/safer?

- Elite rowers (Team Australia)
 - Harris, Trease, Wilkie, Drew (2020)
- Competitive masters
 - Smoljanović, Bohaček, Hannafin, Nielsen, Hren, Bojanic (2018)
- Elite junior rowers
 - Smoljanović, Bojanić, Hannafin, Hren, Delimar, Pećina (2009)
- For rib stress injuries
 - Evans, Redgrave (2016)
- For low back injuries
 - Smoljanović, Bohaček, Hannafin, Nielsen, Hren, Bojanic (2018)

“The majority of rowing injuries are overuse injuries due to an abrupt change in training volume, alterations in technique, or the type of boat rowed.”

“Rowing Injuries” by Hosea & Hannafin (2012)

Needs Analysis:

Personal Factors

Athletic background

Personal strengths, weaknesses, injury history

What if you don't race?

- Training for technique and longevity
- Pick and choose your own goals/methods

Specific Exercises: Pull

**“The sculls are extensions of
the shoulder girdle.”**

~ Ric Ricci

Specific Exercises: Pull

<https://youtu.be/eIBZyj-y7t0>

Specific Exercises: Push

<https://youtu.be/EeUUEXd8O6I>

Specific Exercises: Squat

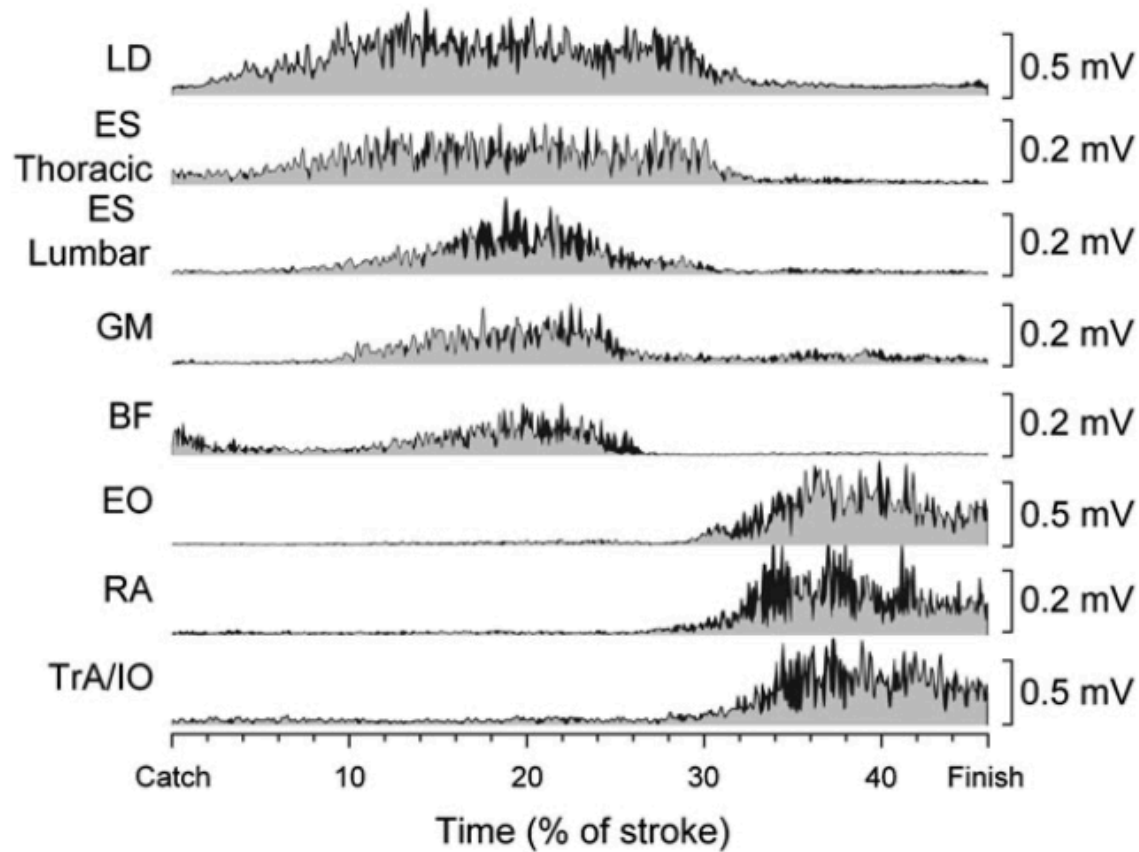
<https://youtu.be/M5iQB-AWYdM>

Specific Exercises: Hinge

<https://youtu.be/ECjk6TU3OFo>

Specific Exercises: “Everything Else”

https://youtu.be/5wOMh_p0xgA



From: Pollock et al. (2012). Changes in kinematics and trunk electromyography during a 2000 m race simulation in elite female rowers. *Scandinavian Journal of Medicine and Science in Sports*, 22.

Programming:

Core Concepts

Increase Strength → Decrease Per-Stroke Effort →
Improve Submax Endurance and Performance

Warm-Up: 10-12 mins general full-body movement

Main Work: 3-8 sets of 3-10 reps (inversely proportional!)

- Strength and Power in Stroke Muscles

Assistance Work: 2-4 sets of 8-15 reps

- Build and Attend to What Rowing Neglects

“Core,” Moving/Carrying, Mobility

- 5-10 minutes

Program Examples

	Sets x Reps	Rest
Full-Body Warmup (See "Warmup" page)		
A. 1/2-Kneeling Overhead Press (DB/KB/Landmine)	3 x 5	60-90s
B. Goblet Squat (DB/KB/Plate) or Front Squat (BB)	3 x 8	90-120s
C1. Pushup / Hands-Elevated Pushup	3 x 10	-
C2. Towel/TRX Row	3 x 10	60-90s
D1. Band Walk Variation	3 x 15	-
D2. YWT Raise	3 x 8 (ea)	-
D3. Any Core Exercise	3 sets	60-90s

	Sets x Reps	Rest
Full-Body Warmup (See "Warmup" page)		
A. 1-Arm Standing Press (DB/KB)	10 - 8 - 6	60-90s
B. Romanian Deadlift (DB/KB/BB)	10 - 8 - 6	90-120s
C1. DB Bench Press or Incline Bench Press	4 x 10	-
C2. 1-Arm Row (DB/KB/Landmine)	4 x 10	60-90s
D1. Reverse Lunge	4 x 12	-
D2. Cable/Band Pullapart	4 x 15	-
D3. Any Core Exercise (pick from index)	4 sets	60-90s

Warm-up (See "Warm-Up" Tab)	Sets x Reps	Rest
A. Hex Bar Deadlift	8 - 6 - 4	2-3 minutes
B1. Alternating DB Overhead Press (seated)	3 x 10	-
B2. 1-Arm DB/KB Row	3 x 10	60-90s
C1. Lateral Step-Up	3 x 10	-
C2. Lat Pulldown (bands or TRX)	3 x 10	60-90s
D. Any Core Exercise	3 sets	60-90s

Programming:

Sprint 1km/2km

More power!

Aerobic/Anaerobic Systems

Tapering

41F2.K. Mens Open AA 4x Final Thu 18:51 Official

Place	Bow	Name	Time	Age
1	4		3:07.633	AA
2	3		3:07.931	AA
3	2		3:22.233	AA

154F1.A. Mens Open K+ 1x Final Sat 19:21 Official

Place	Bow	Name	Time	Age
1	3		4:53.292	J
2	4		5:01.232	J
3	5		6:11.190	J

Programming:

Distance/Head Race

Higher volume rowing = lower volume strength training

Very minimal anaerobic contribution

Tapering

Programming: Coastal Rowing

Rowing volume vs. strength training volume

Distance/style of racing

Weight of the boat

Thank You!

Q&A Ground Rules

- No medical questions
- Please email me for discussion of very in-depth/personal questions
 - StrengthCoachWill@gmail.com

References:

- Harris, Trease, Wilkie, Drew. (2020). Rib stress injuries in the 2012–2016 (Rio) Olympiad. *British Journal of Sports Medicine*, 54.
- Smoljanović, Bohaček, Hannafin, Nielsen, Hren, Bojanic. (2018). Sport injuries in international masters rowers: a cross-sectional study. *Croatian Medical Journal*, 59(5).
- Smoljanović, Bojanić, Hannafin, Hren, Delimar, Pećina. (2009). Traumatic and overuse injuries among international elite junior rowers. *American Journal of Sports Medicine*, 37(6).
- Evans, Redgrave. (2016). Great Britain Rowing Team Guideline for diagnosis and management of rib stress injury. *British Journal of Sports Medicine*, 50.
- Hosea, Hannafin (2012). Rowing Injuries. *Sports Health*, 4(3).