

# Strength Training Difference-Makers

Will Ruth: BS, MA, NSCA-CSCS



# About Will Ruth

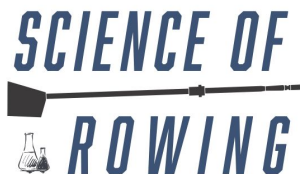
BS Kinesiology, MA Sport Coaching

NSCA-CSCS, US-Rowing L2

Strength Coach Western Washington U 2013-2019

Craftsbury Sculling Center Guest Coach 2019-Pres

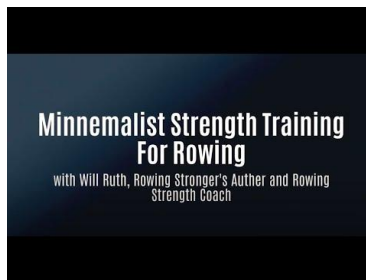
RowingStronger.com and ScienceofRowing.com



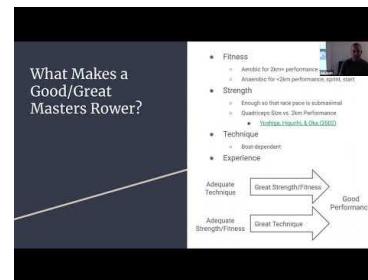
# Prior Webinars



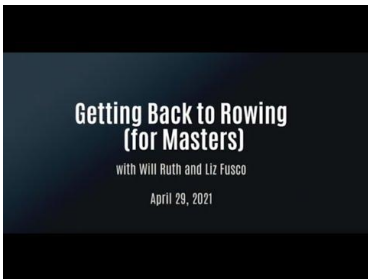
S&C for Masters Rowers  
(Joe DeLeo)



Minimalist Strength Training



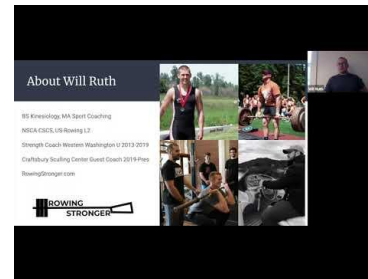
S&C Adjustments for Masters



Return-to-Train for Masters  
(w/ Liz Fusco)



Build the Back, Spare the Spine



Essential Rowing Movements  
of the Shoulder and Hip

# Strength Training Success Stories

## Medals and PRs

On ergs, in team boats, and in small boats, at Crash-B, FISA Worlds, WRICH, Masters Nationals, HOOCR, and more.

“Rowing feels easier.”

“I have more in the sprint.”

## But also...

“I just feel better.”

“None/fewer of the usual aches/tweaks, especially during race prep.”

“I really enjoy strength training now.”

“More enthusiasm in the off-season and greater training consistency.”

# What Do We Do?

# Respect Changes

**ERA:**  
**Pre/Post 1990s**



Square (1847)



Macon (1960)



Cleaver (1992)



**YOU:**  
**Age-Related Changes**

# Age-Related/Hormonal Considerations

## **WOMEN:**

Menopause around 50

3-5-year phase concluding with 12+ months since last menstruation

## **MEN:**

Similar, though less and later (~60)

## **TRAINING TIMELINE:**

21-35: Similar (but, life...)

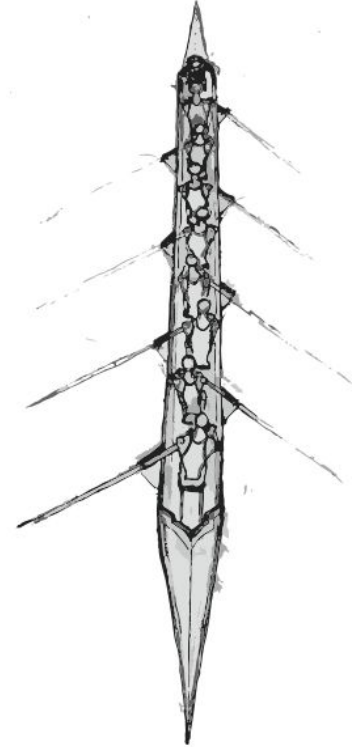
35-45 (women) / 35-55 (men): Some change

45-55 (women) / 55-65 (men): Significant change

55+ (women) / 65+ (men): Some change

# Age-Related Difference-Makers

- Emphasize higher intensity strength training in the 4-10 challenging reps range
- More compound/full-body exercises
- More HIT cardio (>race pace), including 1x/wk in the off-seasons for maintenance
- Good plyometric exercises
- Take deload weeks every 4-10 weeks



# What Do We Do?

## Periodization

Focusing on developing specific qualities while maintaining others, not trying to train everything to peak performance at the same time.

**Level 1:** Off-Season, In-Season

**Level 2:** Off-Season, Pre-Season, In-Season

**Level 3:** Off #1, Off #2, Pre-Season, In-Season

**BEST**

**Year-round (with breaks)**



**3/4 seasons or 9/12 months**

**JUST OK**

**2/4 seasons or 6/12 months**



# Periodization Difference–Makers

## OFF-SEASON

- #1. Health, body composition
  - #2. Base-building: muscle, strength, aerobic
  - #3. Maintain: power, anaerobic fitness
- 2-3 strength training sessions/wk with higher volume and variety to build.

## IN-SEASON (race prep)

- #1. Race performance
  - #2. Maintain: health, muscle, strength
  - #3. Gains are possible, but bonus
- 2 shorter, higher-intensity strength training sessions/wk to maintain what you built.



If you stop strength training at the start of the season, you're strongest when it matters least, and weakest when it matters most!

# Difference-Maker Exercises

Year-round emphasis on:

- Hinge
- Squat
- Push/Press
- Pull
- Shoulder coordination
- Rotational/lateral hip
- Core (beyond planks)

Additional, phase-specific emphasis on:

- Eccentric tempo
- Concentric tempo
- Plyometrics

<https://rowingstronger.com/exercise-index>

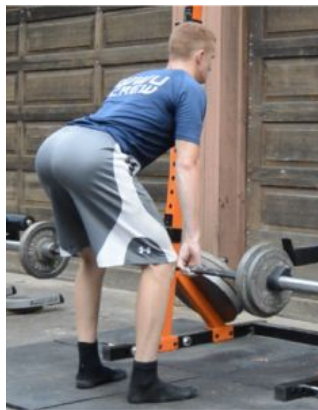
# Training the Hinge



Romanian Deadlift

Kettlebell Swing

Hex Bar Deadlift



# Squat Variations



Power in the legs saves load on the spine.

Early opening = “summing forces”

# Bilateral Squat Variations



Bodyweight



Goblet



Double DB



Front Squat

# Unilateral Squat Variations



Lunge



+ Lateral Step-Up →



RFESS



# Move the Shoulder



<https://youtu.be/FexndB4qELE>

# Push and Press

Variety → Generalizability





# Full ROM Pulling

Generalizable → More Fatigue-Resistant



# Lateral/Rotational Hip Movements

Filling Gaps



<https://youtu.be/JlthtTSRiLA>

# Core: Beyond Planks and Crunches

Specific AND “Anti-Specific”



<https://youtu.be/40CtUV9lkdE>

# Core Training: Much More

## CORE TRAINING FOR ROWERS



<https://youtu.be/eMw8ovSvMwc>

## Strength Training for Rowing

↳ Movement patterns

↳ Loading capacity

Muscles > Skeleton

Availability > Ability

NOT

- Simulate rowing/erging
- "Build mental toughness"
- Evaluate rowing ability

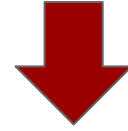


<https://youtu.be/7lcC8mhZDh8>

# Control Eccentric Tempo



**Muscular Tension**



**Load**



**More Stimulus,  
Less Wear-and-Tear**



**Can increase  
muscle soreness**

# Eccentric Tempo Training

**2 - 0 - 1 - 0**



Eccentric - Pause - Concentric - Pause

**3 - 0 - 1 - 0**

**2 - 1 - 1 - 0**

**3 - 1 - 1 - 0**

**4 - 0 - 1 - 0**

Assistance  
Variations



[https://youtu.be/IC0aeiFI\\_Jw](https://youtu.be/IC0aeiFI_Jw)

# Explosive Intent in the Pre/In-Season

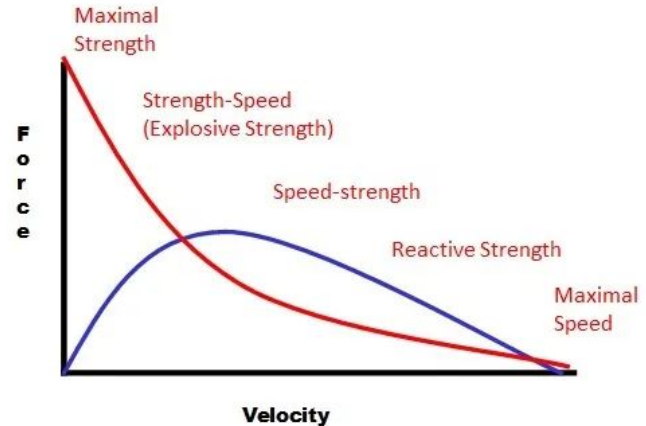
Concentric tempo manipulation

Less weight for low reps and high power output

- 5-8 sets of 2-3 reps with 60-90s rest
- Use a weight that you'd usually do 6-8 reps with

$$P = F * v$$

## Force-Velocity Curve



# Full Explosive Intent Training



<https://youtu.be/r8dlB3hL-wl>

## Pre-Season/In-Season

- Squat
- Romanian Deadlift/Hex Bar Deadlift
- Push Press (1-arm/2-arm)

Often alternate weeks or training sessions for power/strength

- Week A:
  - Day 1: Squat for power
  - Day 2: Hinge for strength
- Week B:
  - Day 1: Squat for strength
  - Day 2: Hinge for power



# Proper Plyometrics

## DO MORE

Low rep

Power output

1:4+ work:rest

Gym floor,  
mat/pad, grass

Use throws and  
jumps, SL/BL

Full explosive  
intent!

## DO LESS

High rep

“Endurance”

Low/no rest

Concrete/boat-  
house flooring

Do the same stuff  
all the time

Burpees

# Plyometric Training Exercises

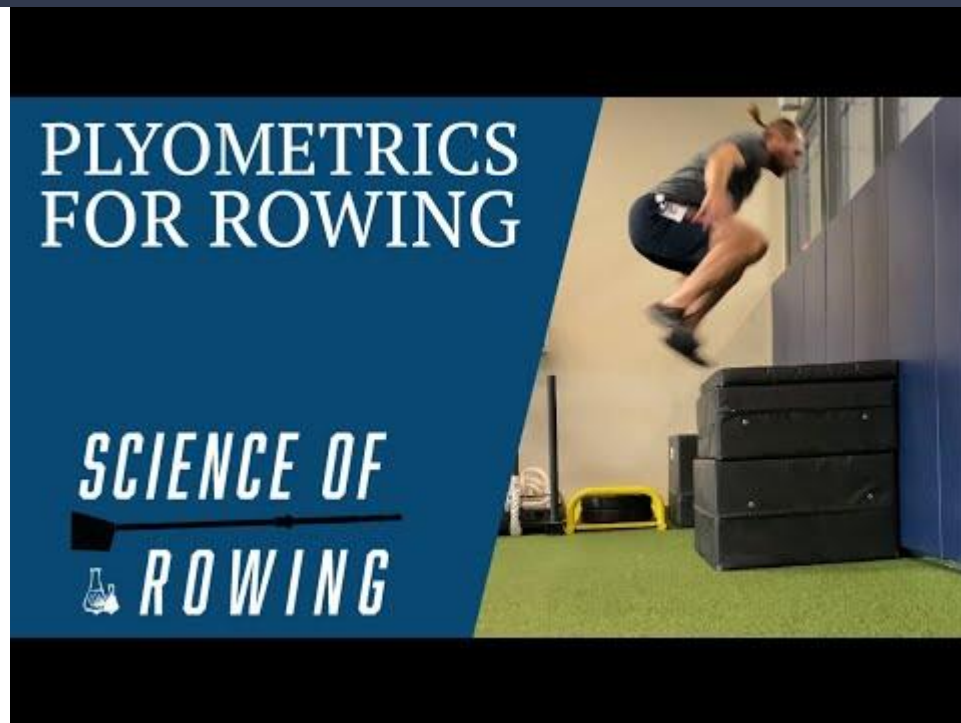
Year-Round or Pre-Season/In-Season

- After the full-body warm-up
- Paired with first exercise

Use Variations

- Bilateral/Unilateral Jumps
- Broad/Vertical/Box Jumps
- Forward/Backward Throws
- Distance/Height Throws

Train for power and coordination!



<https://youtu.be/zScE00SRXTI>

# Training Session Template

Day 1
Full-Body Warmup
A1. Plyometric (Jump/Throw)
A2. Squat
B1. Horizontal Push (eg. pushup)
B2. Horizontal Pull (eg. row)
B3. Hinge (eg. Romanian deadlift)
C1. Lateral/Rotational Hip
C2. Shoulder Prehab
C3. Core

~10 mins to prepare

← 3-6 x 2-4 reps for power/coordination →

← Train for power/strength (3-5 x 3-8 reps) →

← Train for muscle/balance (3-4 x 8-15 reps) →

← Train to fill gaps (2-4 x 10-20 reps) →

Day 2
Full-Body Warmup
A1. Plyometric (Jump/Throw)
A2. Deadlift Variation
B1. Overhead Press (eg. 1-arm DB)
B2. Vertical Pull (eg. chin-up)
B3. Single-Leg Squat (eg. RFESS)
C1. Lateral/Rotational Hip
C2. Shoulder Prehab
C3. Core

# Presentation Slides, Links, and More

[StrengthCoachWill@gmail.com](mailto:StrengthCoachWill@gmail.com)

[www.RowingStronger.com/RowCon2021](http://www.RowingStronger.com/RowCon2021)

