

Athletes in Hiding

The Truth Behind a Sailing Fitness Program



Goals of Presentation

- Evolution of Sailing fitness → Future
- Job of the Strength & Conditioning Coach
- Understand a **FULL** Strength and Conditioning (S&C) Program (for sailing athlete)
- Injury Awareness (sailing specific)



Evolution of Sailing Fitness

Past

- Lack of structure
- Over emphasis on road biking
- Lack of emphasis no training cycles



Present

- Full systems training
 - Strength
 - Cardiovascular
 - Flexibility
 - Injury Prevention
 - Sailing specific



Evolution of Sailing Fitness

Future: Objective Measuring



Evolution of Sailing Fitness

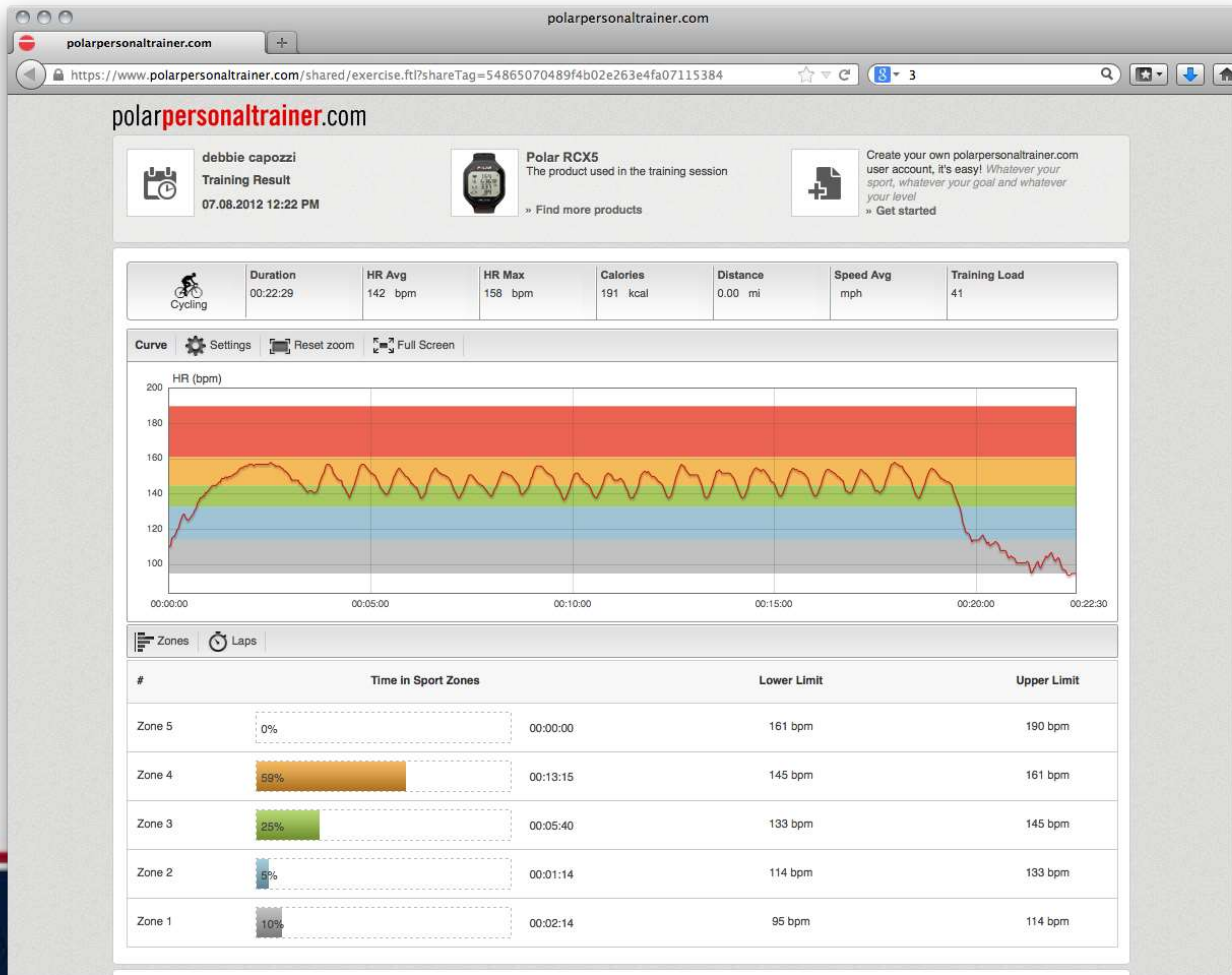
Future: Objective Measuring:

- Cardiovascular Testing with sailing implementation
- Body Assessment
- Strength Testing & Power Testing



Evolution of Sailing Fitness

Future: Specific Cardiovascular Sailing training



Assessment

Body Assessment										
Overhead Squat Assessment										
View	Joint Area	Compensation	Overactive		Tight		Underactive		Weak	
Lateral	Hip Complex	Excessive Forward Lean	Soleus		Soleus		Ant Tibialis		Ant Tibialis	
			Gastroc		Gastroc		Glute Max		Glute Max	
		Low Back Arch	Hip Flexors		Hip Flexors		Erector Spinae		Erector Spinae	
			Erector Spinae		Erector Spinae		Glute max		Glute max	
	Upper Body	Shoulder Extension	Lat Dorsi		Lat Dorsi		Mid/low Trap		Mid/low Trap	
			Teres Major		Teres Major		Rhomboids		Rhomboids	
		Pecs		Pecs		Ext Rotators		Ext Rotators		
Anterior	Feet	Heels In	Soleus		Soleus		Med Gastroc		Med Gastroc	
			Lat Gastroc		Lat Gastroc		Med Hamstring		Med Hamstring	
	Biceps femoris		Biceps femoris		Gracilis		Gracilis			
					Sartorius		Sartorius			
	Knees	Feet Flatten	Adductors		Adductors		Glutes		Glutes	
			Hamstring		Hamstring		VMO		VMO	
			TFL		TFL					

Strength & Power Testing

Strength Capacity

Push-Up Max Test:

Chin-Up Max Test:

3 Repetition Bench Max Test:

3 Repetition Back Squat Test:

3 Repetition Seated Row Max Test:

Rope Pull Max Repetitions

Trial 1

Trial 2

Power Output

30 s Max Ergometer: _____ watt

2 min Avg Ergometer: _____ watt

Agility Proprioception

Proprioception	
Single Leg Proprioception	
<i>Left Leg</i>	<i>Right Leg</i>
<i>Trial 1</i>	
<i>Trial 2</i>	
Agility	
Tracking Test	
<i>Trial 1</i>	
<i>Trial 2</i>	
Pro Agility	
<i>Trial 1</i>	
<i>Trial 2</i>	

Evolution of Sailing Fitness

Future: Year-round Training and Cross-Training



S & C Coach Responsibilities

1. Communicate with athlete
1. Communicate with coach
2. Analyze athletes physical Job
 - Biomechanics
 - System usage
3. KEEP INJURY FREE *second half of presentation
4. Prepare Athlete to compete at highest level



Structuring Fitness

PERIODIZATION (*!¥⌘≐?!ø€ûæ)

- Quadrennium
- Yearly
 - Events (2-3 peaking events)
- **PHASES**
 - Specific goals in each phase
 - Preparation
 - Strength Endurance
 - Strength
 - Power/sports specific
 - Weekly
 - » Daily



Phases

- Characteristics of Program
 - Sets
 - Repetitions
 - Rest
 - Exercise Combination



Phases

- NOT:

WEIGHT!!!!!!



Questions?



Yearly View

January	February	March	April	May	June	July	August	September	October
	USS Miami OCR				Laser Women Long Beach		1 Test training Rio		
					Laser Women Long Beach		2 Test event Rio		
							3 Test event Rio		
							4 Test event Rio		
Rio Regatta Practice							5 Test event Rio		
Rio Regatta Practice							6 Test event Rio		
Rio Regatta Starts							7 Test event Rio		
Rio Regatta							8 Test event Rio		
Rio Regatta						Fly Brazil	9 Test event Rio	ISAF Worlds	
Rio Regatta					Laser Women Long Beach	Fly Brazil	10	ISAF Worlds	
Rio Regatta finish					Laser Women Long Beach	Rio 2 men/2 women	11	ISAF Worlds	
					North Americans LA	Rio 2 men/2 women	12	ISAF Worlds laser star	Rio women
					North Americans LA	Rio 2 men/2 women	13	ISAF Worlds	Rio women
					North Americans LA	Rio 2 men/2 women	14	ISAF Worlds	Rio women
			Hyeres Practice		North Americans LA	Rio 2 men/2 women	15	ISAF Worlds	Rio women
			Hyeres Practice			Rio 2 men/2 women	16	ISAF Worlds	Rio women
			Hyeres Practice	Laser Women Long Beach		Rio 2 men/2 women	17	ISAF Worlds	Rio women
			Hyeres Practice	Laser Women Long Beach		Rio 2 men/2 women	18	ISAF Worlds laser finis	Rio women
			Hyeres Start	Laser Women Long Beach		Rio 2 men/2 women	19	ISAF Worlds	
			Hyeres	Laser Women Long Beach		Rio 2 men/2 women	20	ISAF Worlds	
Laser Women camp			Hyeres	Laser Women Long Beach		Rio 2 men/2 women	21	ISAF Worlds	
Laser Women camp			Hyeres	Laser Women Long Beach		Rio 2 men/2 women	22		
Laser Women camp			Hyeres			Fly UK	23		
Laser Women camp			Hyeres			UK	24	Rio women	
Rest Day			Hyeres			UK	25	Rio women	
Miami OCR			Hyeres Finish	chula vista	Laser Women Santra B	Jeremy wedding	26	Rio women	
Miami OCR				chula vista	Race PCC Laser Wome	Jeremy wedding	27	Rio women	
Miami OCR				chula vista	Race PCC Laser Wome	Fly Brazil	28	Rio women	
Miami OCR					Laser Women Long Beach	Test training Rio	29	Rio women	
Miami OCR					Laser Women Long Beach	Laser Women Santra B	30	Rio women	
Miami OCR					Laser Women Long Beach	Test training Rio	31		



Yearly View

- See Excel sheet (book)

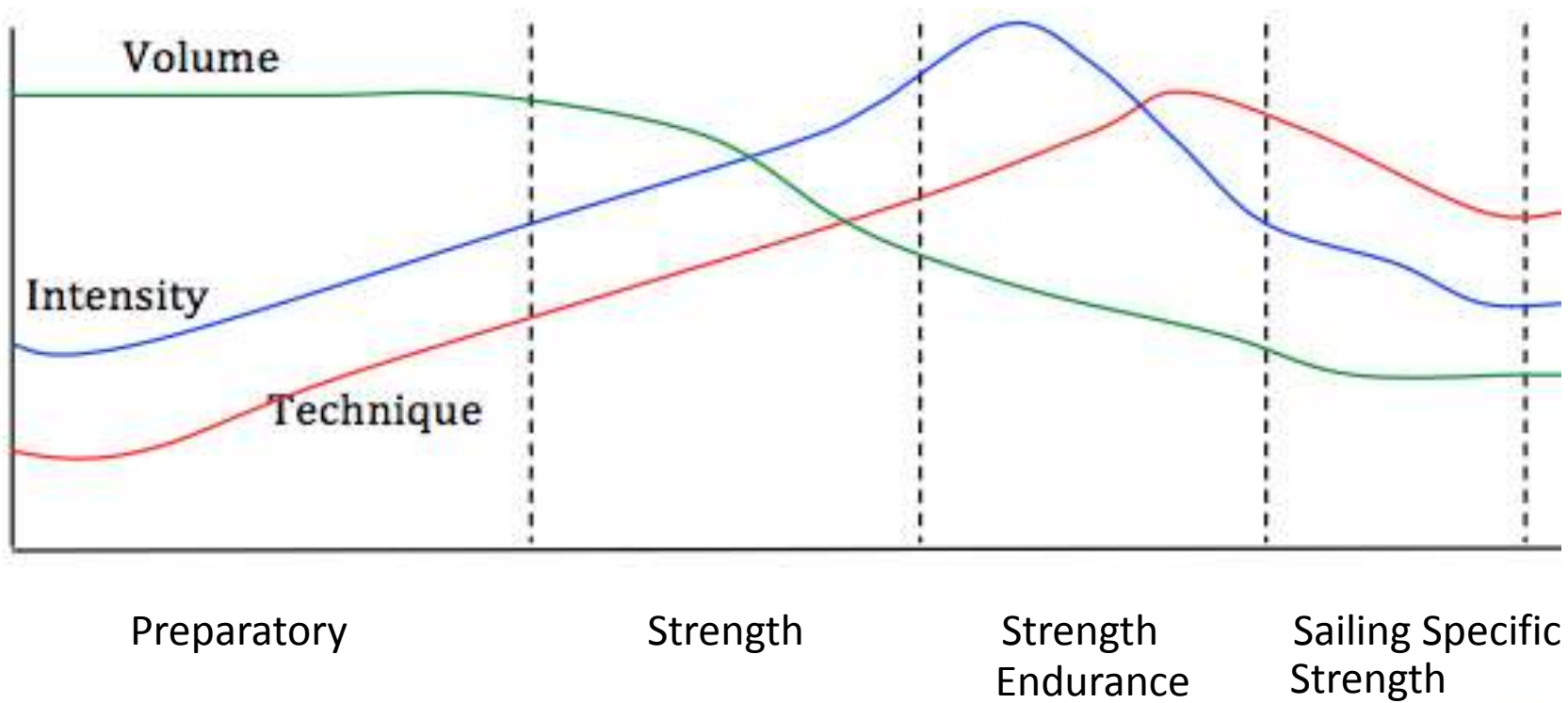


Macrocycle Phases

- General Preparatory Phase
 - “Off Season”
- Strength
 - “Off Season to Pre-Season”
- Strength Endurance
 - “Pre-Season”
- Specific Sailing Strength
 - “In Race & Taper”



Phases



Preparation Phase

- Emphasis: (Building Your BASE)
 - General Aerobic Endurance
 - Basic Technique
 - Balance (Stability)
 - Flexibility
 - Muscular Strength



Preparation

WO 1 (Legs)

WARM-UP: UMPING JACKS, SEAL JACKS, WIDEOUTS: 3X10, SH COMBO #1(DB V'S, T-Shrug, Bent Over W's,: 1x5 each with 5 sec hold)

CORE (complete as circuit)

REST between groups 1 min

CORE (complete as circuit)

Weighted Crunches legs up	2x40	no rest
LM Lateral Jerk	2x10 E	no rest
Sit ups with Rocky Twist	2x30	no rest

MOVEMENT

1RM

REST

SET 1

SET 2

SET3

SET 4

SET 5

Tuck Jumps		10-30s	5	5	5	
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MAIN LIFT (Complete As Circuit WITH 90 SEC REST AFTER A4)

A1. Front Squat		45-60 S	15	15	15	15
A2. SA OverHead Bulgarian Squats			8 E	8 E	8 E	
A3: Lateral DB Swings		60 SEC	8 E	8 E	8 E	

AUXILLARY (Complete As Circuit WITH 60 SEC REST AFTER B4)

B1: S. Leg Hip Bridges			8 E	8 E	8 E	8 E
B2. PB Leg Curls (keep hips high the whole time)			20	20	20	20
B4. PB Knee Tucks (fast)		no rest	20	20	20	20

SPP / REINFORCEMENT (COMPLETE AS CIRUCIT)

Active Stretching

D1. HIP CIRCUIT/FIRE HYDRANTS			2X10 E		BAND STRETCH ROUTINE FOR LEGS	1X10 E
D2.S LEG HIP BRIDGES		30s	2X12 E		FOAM ROLL LEGS, TFL	5 MIN

Strength

- Emphasis:
 - Strength
 - Building on growing & expanding your base
 - Heavy Weights
 - Neural and Movement Efficiency
 - Quality Repetitions not quantity



Strength

Jaguar Therapeutics

Athlete										Phase- Strength									
SPORT:					Sailing:														
WO 1 (Legs)																			
WARM-UP: UMPING JACKS, SEAL JACKS, WIDEOUTS: 3X10, SH COMBO #1(DB V'S, T-Shrug, Bent Over W's,: 1x5 each with 5 sec hold)																			
CORE (complete as circuit)										REST between groups 1 min									
Weighted Crunches legs up										2x40					no rest				
LM Lateral Jerk										2x10 E					no rest				
Sit ups with Rocky Twist										2x30					no rest				
MOVEMENT		1RM	REST	SET 1	SET 2	SET 3	SET 4	SET 5											
Reverse Lunges				8 E	8 E	8 E													
Tuck Jumps			30s	6	6	6													
MAIN LIFT (Complete As Circuit WITH 90 SEC REST AFTER A4)																			
A1. Front Squat			75s	8	6	6	6	6											
A2. Bulgarian Squat to Press			75s	4 E	4 E	4 E													
AUXILLARY (Complete As Circuit WITH 60 SEC REST AFTER B4)																			
B1: Lateral DB Swings			90 SEC	6 E	6 E	6 E													
B2. S. Leg Curls (Superslow on the way down)				12 E	12 E	12 E													
B3. Suspension Froggers			no rest	15	15	15													
SPP / REINFORCEMENT (COMPLETE AS CIRUCIT)										Active Stretching									
D1. HIP CIRCUIT/FIRE HYDRANTS				2X10 E					BAND STRETCH ROUTINE FOR LEGS					1X10 E					
D2.S LEG HIP BRIDGES			30s	2X12 E					FOAM ROLL LEGS, TFL					5 MIN					

Strength Endurance

- Emphasis
 - Anaerobic and Muscle Endurance
 - Technique with Increased Intensity
 - Muscular Strength
 - Core Stabilization
 - Flexibility
 - Multi-Joint Movements



Strength Endurance

Jaguar Therapeutics

Athlete										Phase- Strength Endurance													
SPORT:					Sailing:																		
WO 1 (Legs)																							
WARM-UP: UMPING JACKS, SEAL JACKS, WIDEOUTS: 3X10, SH COMBO #1(DB V'S, T-Shrug, Bent Over W's,: 1x5 each with 5 sec hold)																							
CORE (complete as circuit)					REST between groups 1 min					CORE (complete as circuit)													
Weighted Crunches legs up					2x40					no rest													
LM Lateral Jerk					2x10 E					no rest													
Sit ups with Rocky Twist					2x30					no rest													
MOVEMENT																							
					1RM		REST		SET 1			SET 2			SET3			SET 4			SET 5		
Tuck Jumps							10-30s		8			8			8								
MAIN LIFT (Complete As Circuit WITH 90 SEC REST AFTER A4)																							
A1. Front Squat							75s		12			10			8			8					
A2. Bulgarian Squat to Press									6 E			6 E			6 E								
A3: Lateral DB Swings							90 SEC		6 E			6 E			6 E								
AUXILLARY (Complete As Circuit WITH 60 SEC REST AFTER B4)																							
B1: S. Leg Hip Bridges									15 E			15 E			15 E			15 E					
B2. PB S. Leg Curls (keep hips high the whole time)									12 E			12 E			12 E			12 E					
B4. PB Knee Tucks (fast)							no rest		20			20			20			20					
SPP / REINFORCEMENT (COMPLETE AS CIRUCIT)										Active Stretching													
D1. HIP CIRCUIT/FIRE HYDRANTS									2X10 E						BAND STRETCH ROUTINE FOR LEGS			1X10 E					
D2.S LEG HIP BRIDGES							30s		2X12 E						FOAM ROLL LEGS, TFL			5 MIN					

Sports Specific Strength

- Emphasis
 - Movement Speed
 - Improving Strength Specific to Sailing
 - Maintaining Top Condition
 - Races



Specific Strength

Jaguar Therapeutics

Athlete										Phase- Specific Strength									
SPORT:										Sailing:									

WO 1 (Legs)

WARM-UP: UMPING JACKS, SEAL JACKS, WIDEOUTS: 3X10, SH COMBO #1(DB V'S, T-Shrug, Bent Over W's,: 1x5 each with 5 sec hold)

CORE (complete as circuit)				REST between groups 1 min				CORE (complete as circuit)			
Weighted Crunches legs up		2x40		no rest							
LM Lateral Jerk		2x10 E		no rest							
Sit ups with Rocky Twist		2x30		no rest							

MOVEMENT	1RM	REST	SET 1	SET 2	SET3	SET 4	SET 5
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Tuck Jumps		30s	6	6	6	6	
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MAIN LIFT (Complete As Circuit WITH 90 SEC REST AFTER A4)

A1. Front Squat		75s	8	6	5	3	3
A2. Power Lunge Switches			5 E	5 E	5 E	4 E	4 E
A2. Bulgarian Squat to Press		75S	4 E	4 E	4 E		

AUXILLARY (Complete As Circuit WITH 60 SEC REST AFTER B4)

B1: Band Hip Flexion (FAST)		90 SEC	15 E	15 E	15 E		
B2: Lateral Bounds		91 SEC	6 E	6 E	6 E		

SPP / REINFORCEMENT (COMPLETE AS CIRUCIT) Active Stretching

D1. HIP CIRCUIT/FIRE HYDRANTS			2X10 E			BAND STRETCH ROUTINE FOR LEGS	1X10 E
D2.S LEG HIP BRIDGES		30s	2X12 E			FOAM ROLL LEGS, TFL	5 MIN

Energy Systems

- POWER (PHOSPHAGON) up to 10 sec
- ANAEROBIC (30 SEC (PEAK) UP TO 2 MIN
- AEROBIC (2 MIN AND ABOVE)



Energy Systems

Cardiovascular Endurance + Muscular Endurance



Aerobic Endurance



Endurance

Cardiovascular Endurance

- The ability of the heart to deliver oxygen to the working muscles, and the muscles ability to use that oxygen

Muscular Endurance

- The ability of a muscle or group of muscles to sustain repeated contractions against a resistance for an extended period of time before fatigue
 - Muscles also weaken for a variety of reasons, such as illness, injury and poor nutrition



Endurance

Aerobic Endurance

- Main Energy System for activities >2-4 minutes



Endurance

Anaerobic Energy System

- For activities lasting 10 seconds-2 minutes
- Short Intense Activities
 - Strength Training
 - Interval Training



Important Facts

- You must have:
 - a minimum level of aerobic endurance, so that your cardiovascular capacity does not limit your athletic capabilities
 - a high level of anaerobic endurance, as this is where most of your activity will take place.



Endurance Goals

- Muscular endurance is a key factor in training for cardiovascular endurance
- Aerobic endurance base will be built during the preparatory phase
- After that, aerobic endurance will be trained more specifically for sailing through anaerobic means



How to train Aerobic Endurance

- Can be a variety of different things:
 - **LSD** (long slow distance) : burning fat as a fuel source
 - **HIIT** (High Intensity interval training) 20sec hard : 40 sec slow
 - **Threshold Training (lactate)**: 40sec hard : 20 sec slow
 - 8-20 sets
 - Lactate is a byproduct of your body during intense exercise
 - Goal is to maintain a high level of performance with elevated lactate & improving the bodies ability to clear that lactate



How to train Aerobic Endurance

You can train aerobic endurance, **anaerobically**.

- Example: Repeated intervals, with short rest
- **WEIGHT ROOM:**
 - DEAD LIFTS to POWER LUNGE JUMPS to SQUAT JUMPS)



Cardio Programing Example

Week 1

Prep Phase

Mode	Bike		Run		Run	Bike	
	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
	Intervals (75% speed)	OFF	LSD	OFF	Recovery	HIT	OFF
Target HR	176-186	OFF	155-165	OFF	150-160	Max Effort	OFF
Description	15 x 20s Sprint 40s Recovery		45min Stretch after		20mins	8x12s Max Sprint 60s Recovery	
Target RPE	16-17		≤14		≤14		20
Calories Burned							

Week 2

Prep Phase

Mode	Bike		Run		Run	Bike	
	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
	Intervals (75% speed)	OFF	LSD	OFF	Recovery	HIT	OFF
Target HR	176-186	OFF	155-165	OFF	150-160	Max Effort	OFF
Description	19 x 20s Sprint 40s Recovery		45min Stretch after		20mins	10x12s Max Sprint 60s Recovery	
Target RPE	16-17		≤14		≤14		20
Calories Burned							



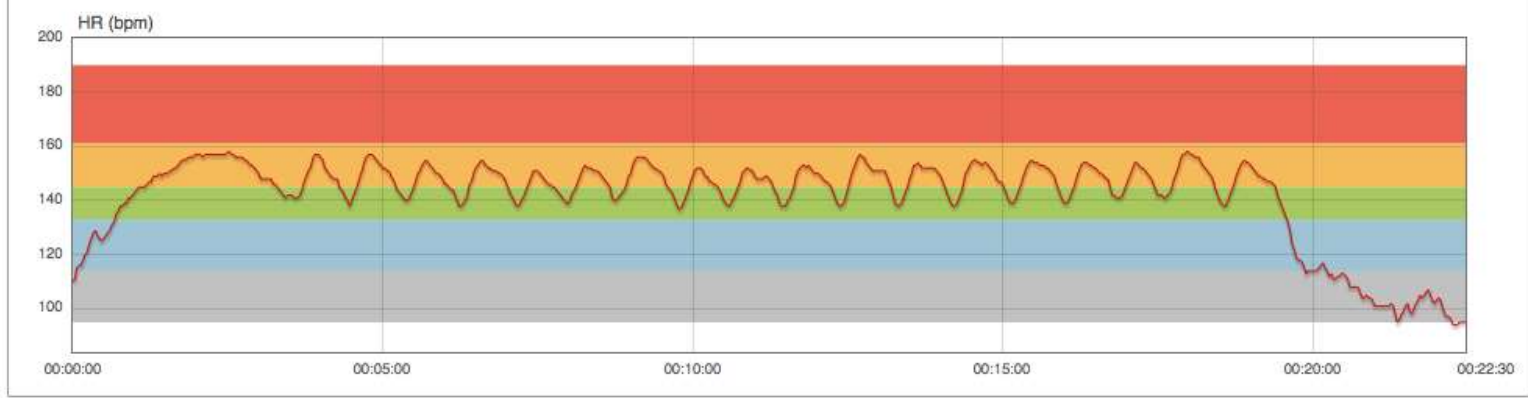
debbie capozzi
Training Result
 07.08.2012 12:22 PM

Polar RCX5
 The product used in the training session
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Cycling	Duration 00:22:29	HR Avg 142 bpm	HR Max 158 bpm	Calories 191 kcal	Distance 0.00 mi	Speed Avg mph	Training Load 41
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Curve Settings Reset zoom Full Screen



Zones Laps

#	Time in Sport Zones	Lower Limit	Upper Limit
Zone 5	0%	00:00:00	161 bpm
Zone 4	58%	00:13:15	145 bpm
Zone 3	25%	00:05:40	133 bpm
Zone 2	5%	00:01:14	114 bpm
Zone 1	10%	00:02:14	95 bpm

Questions



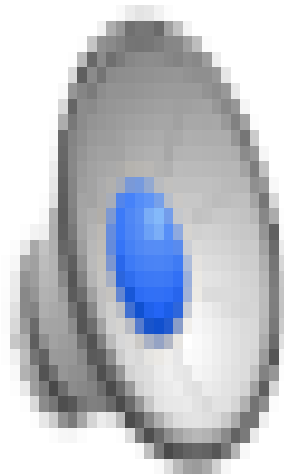
Exercise Examples



HIKING: bent Leg, 180 degree, Abd focus



HIKING: bent Leg, 180 degree, Abd focus



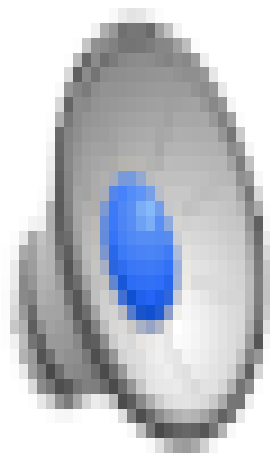
33 sec



Hiking bent knee 180 lat shift



HIKING: bent knee, 180 degree lateral shift



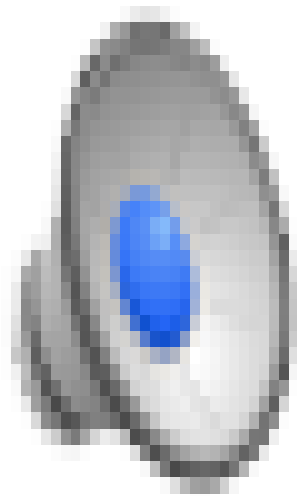
33 sec



Hiking Row Single Arm Row



Hiking Row Single Arm



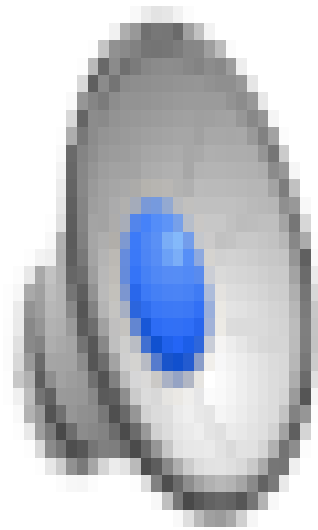
55 sec



Hiking: lateral ball toss



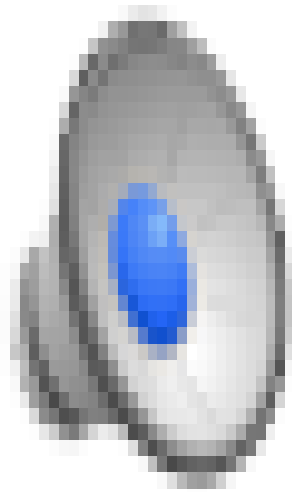
Ropes (Hiking St leg low with shld flexion)



1.35 sec



Ropes: Hiking St leg trunk rotation low position



1.35 sec



Questions



Sailing Injuries

- Epidemiology of Injury
- Biomechanics of these Injuries
- Rehab and Pre-hab Capabilities



Epidemiology of Injury

- Miami OCR Regatta Injury Contacts (chart 1)
- Injury by Percentages (chart 2)
- USA Injury Patterns (chart 3)

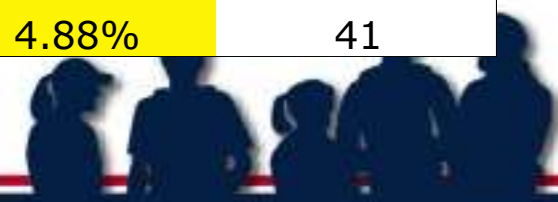


Chart 3

MIAMI OCR REGATTA INJURY CONTACTS (USA ONLY)

<u>DATE (JAN)</u>	<u>CERVICAL SPINE</u>	<u>SHOULDER</u>	<u>LUMBAR SPINE</u>	<u>KNEE</u>	<u>Total US Contacts</u>
2006*	1	3	6	9	34
2007	12	6	9	2	50
2008	6	8	3	1	26
2009	7	10	8	5	50
2010	5	3	8	3	41
2011	3	4	4	2	41

<u>DATE (JAN)</u>	<u>CERVICAL SPINE</u>	<u>SHOULDER</u>	<u>LUMBAR SPINE</u>	<u>KNEE</u>	<u>Total US Contacts</u>
2006*	2.94%	8.82%	17.65%	26.47%	34
2007	24.00%	12.00%	18.00%	4.00%	50
2008	23.08%	30.77%	11.54%	3.85%	26
2009	14.00%	20.00%	16.00%	10.00%	50
2010	12.20%	7.32%	19.51%	7.32%	41
2011	7.32%	9.76%	9.76%	4.88%	41



Analysis

- January 2006
 - Started working with team members to develop movement patterns from Olympic lifting (start position) along with Movement patterns (deep squat position)
- March 2009
 - Implemented a Shoulder Pe-hab program (Scapular + RTC)
 - » Decrease of: 12.68%



Analysis

- March 2010
 - Implemented a Cervical Pre-hab program for all US team members
 - » Decrease of: 4.88%
 - Implemented a Sailing Sport Specific Low Back Strength program, Self mob/rehab program
 - » Decrease of: 9.75%

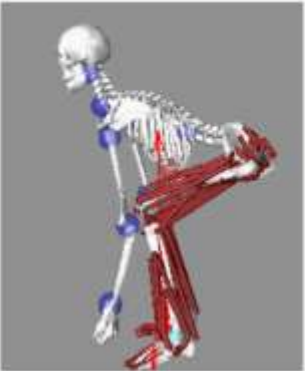







Common Injuries

- Lumbar Facet dysfunctions
- Low back muscular strains
- Lumbar spine pain
- Hyper and hypo-mobile lumbar segments
- Shoulder impingements
- Meniscal injuries
- Patellar femoral Pain
- ACL tears



Biomechanics of Injuries

	Deadlift	Normal Squat	Single-leg squat
Muscle Module			
Joint Module			



Vulnerable Positions

- Hiking
 - [Hiking \(Laser\)](#)
 - [Hiking \(Finn\)](#)
- Trapezing
 - [Trapeze Video 1](#)
 - [Trapeze video 2](#)



Hiking

- Leg extension (through the hiking strap): This force is magnified by:
 - Patella compressive forces
 - » Lateral tracking
 - Quad and patella tendon stress
 - Valgus and varus stresses while shifting on a locked knee
 - Rotational torque on locked knee
 - Flexion/extension forces with starting the “tacking” process



Lumbar Spine (Proper Position)

- Back is in isometric extension
- Slight arch in the low back
- IVD centered
- Chest out
- Scapulas slightly pulling together
- Neck in neutral



Lumbar Spine (bad position)

- A fatigued/lazy position
 - Loss of arch in low back
 - IVD pushed posterior
 - Rounded shoulders
 - Forward head
 - Protracted scapulas



Lumbar Stresses

- Lumbar Spine involvement L1-L5 (over edge of hull)
 - Prolonged flexion posture
 - Repetitive flexion/extension
 - Repetitive side glide
 - Shearing forces



Trapeze (Vulnerable Joints)

- Lumbar Spine
- Shoulder Complex
- Cervical Spine



Trapeze (Shoulder & Cervical)

- Shoulder Complex
 - Cleating
 - Shoulder: abduction, flexion, and IR
 - Bicep Flexion
 - Hooking/unhooking
 - Distraction
 - Protraction/Retraction
- Cervical Spine Involvement
 - Flexion of Upper Cervical
 - Extension of Lower Cervical
 - Rotation



Trapeze (Lumbar Spine)

- **Body is in triple extension**
 - Hips
 - Knees
 - Ankle
- **Proper position**
 - IVD centered
 - Chest out
 - Scapulas slightly pulling together
 - Neck in extension and rotation
- Lumbar Spine involvement L1-L5 (hooked in Harness)
 - Prolonged extension
 - Repetitive side glide



Cervical Focus

- Restore ROM
- Isometric Strength
 - Neutral
 - Beginning Range
 - End Range
- Resistance
 - 8 Week Cervical Program



Cervical Program

Stage 1 (2 weeks) 4 days a week

Exercise-Complex	Sets	Reps	Wt.	Rest
Neck Flexion Isometric (Start, Mid, Finish)	2	12	15 sec hold	0
Neck Extension Isometric (Start, Mid, Finish)				0
Neck R. and L. Side Bend Isometric (Start, Mid, Finish)				1 min
Neck Flexion Full ROM laying on back	3	12	0	0
Neck Extension Full ROM laying on stomach		12		0
Neck R. and L. Side Bend Full ROM laying on side		12		1 min
Neck R. and L. Side Bend Stretch with weight	3	15 sec	5 lb	0

Stage 2 (2 weeks) 4 days a week

Exercise-Complex	Sets	Reps	Wt.	Rest
Neck Retraction with hold laying on Back	2	12	10 sec hold	0
Neck Protraction with Isometric Hold in Sitting				1 min
Neck Flexion Full ROM with Weight	2	12	2.5 lb or 5 lb	0
Neck Extension Full ROM with Weight				0
Neck R. and L. Side Bend with Weight				1 min
Neck Chin to Ear Rotation R and L. Full ROM	2	12	0	0
Neck R. and L. Side Bend Stretch with weight		15 sec	5 lb	1 min

Stage 3 (2 weeks) 4 days a week

Exercise-Complex	Sets	Reps	Wt.
Neck Retraction with hold laying on Back	3	12	10 sec hold
Neck Protraction with Isometric Hold in Sitting			
Neck Flexion Full ROM with Weight	3	12	2.5 lb or 5 lb
Neck Extension Full ROM with Weight			
Neck R. and L. Side Bend with Weight			
Hold	3	12	10 sec hold
Neck Chin to Ear Rotation R and L. Full ROM	3	12	0
Neck R. and L. Side Bend Stretch with weight		15 sec	5 lb

Stage 4 (2 weeks) 4 days a week

Exercise-Complex	Sets	Reps	Wt.
Neck Retraction with hold laying on Back	3	12	15 sec hold
Neck Protraction with Isometric Hold in Sitting			
Neck Flexion Full ROM with Weight	3	12	2.5 lb or 5 lb
Neck Extension Full ROM with Weight			
Neck R. and L. Side Bend with Weight			
Hold	3	12	15 sec hold
Neck Chin to Ear Rotation R and L. Full ROM	3	12	0
Neck R. and L. Side Bend Stretch with weight		15 sec	5 lb

Rehab & Pre-hab Program

- ◆Cervical 8-wk Program
- ◆Shoulder Strength/Mobility Progression
- ◆Lumbar Strength/Mobility Progression
- ◆Knee Strength Progression



Shoulder Focus

- Pain Free ROM
- Anterior Structure Stretching (Pecs)
- Scapular Strengthening
 - Bands
 - Compression
 - Light DB
 - Suspension
- RTC Strengthening
 - Same progression as above



Lumbar Focus

- Pain Free Mechanics and ROM (Mckenzie Principles)
- Core Strengthening
- Rotational Strengthening



Knee Focus

- Pain Free ROM
- Stabilization through
 - Balance
 - Proprioception
- Quad Strengthening
- Hip Strengthening



Dynamic Return to Sport

- Hiking
 - Static
 - SL vs. Bk
 - Abd focus
 - Exten focus
 - Flex/Ext
 - Lat Movt
 - Lat Shift
- Ropes (oscillation)
 - Large vs. Small
 - Trunk vs. Extreme
 - Linear
 - Diagonal

**All of these exercises are progressed with an increase in time and change in body position



Common Injuries

- Forearm compartment syndrome
- Hand / Finger strains and sprains
- Wrist sprains

- Ankle Ligament sprains
- Ankle ligament tears



Forearm/ Wrist Focus

- Stretching / Soft tissue mobilization
 - Stretching: Wrist Flexion/Extension (Elbow bent & straight)
 - ST Mobilization: Graston
- Forearm/Hand Strengthening
 - Grip Endurance (DB wrist curls/extensions, Plate holds, Fat Bar, Flashers, Beans, Flex Bar)



Ankle Focus

- Stretching
 - Ankle Flexion/Extension
- Ankle Strengthening
 - Heel Raises, Toe Walks
 - Band exercises
 - Agility exercises: (Cone drills, lateral agility, speed ladder, sprinting in grass)



Thank you

Dr. Chris Herrera

JaguarPT@gmail.com

305-742-4368



Jaguar Therapeutics

3305 Rice Street, Miami FL 33133



Thank you

- Your Opinion Matters

- Please “**check-in**” to this session on the Sailing Leadership Forum app
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 - Or
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