

JEB Stuart Crew Winter Conditioning

For those who don't have a winter sport and are interested in improving their fitness level the Stuart Crew Coaching Staff is offering a Winter Conditioning Program. We'll begin in November and run through late February. The program is designed to help improve your endurance, strength, and flexibility for the upcoming spring season. We view this as a 5-day plan ... 4 of the days will be organized activity at the school; 1 day will require outside activity, for example, getting together to run, bike, etc.

To start—the best way to get faster is to enable yourself to train consistently by eating right, getting enough sleep, not getting sick, injured or burned out. Someone participating in winter training should be honest with themselves about what they can sustain for the whole winter. If that means working only three times a week, that's better than training every day in November and then quitting until February because you burnout. You can get a decent level of fitness from as little as 45 minutes a day for five days a week.

Cross training is also an important part of the winter plan. For the serious rower, the erg is your friend; however, adding running, cycling, spinning, stair climbing, or swimming in addition to erging can keep you from getting injured or bored. In all of these cases, use of a heart rate monitor will help you determine how hard to go. We'll also incorporate strength and off-erg conditioning into the plan. If everyone commits to get their heart rate above 150 for 45 minutes five times a week consistently through the winter, and works to improve strength and flexibility, we'll be faster as a team in the spring.

WORKOUT FOCUS

TRANSPORTATION WORKOUTS (TR1 and TR2)

The goal for the transportation workouts is to improve the efficiency of the heart, so it can pump more blood per beat. This means more oxygen will be delivered to the muscle cells.

The intensity of the workouts has to be high enough (90-95% of HRmax) to be able to stimulate the heart.

That also means that the rowing cadence has to be relatively high, from 0-6 beats below a typical racing rate.

UTILIZATION WORKOUTS (U2 and U1)

The major goal of this type of workouts is to improve utilization of oxygen in the muscle cells. Utilization workouts increase the size and number of mitochondria, and increase the number of capillaries around the muscles cells.

This can be accomplished by long distance workouts at low and medium intensity.

ANAEROBIC THRESHOLD WORKOUTS (AT)

The goal of these workouts is to help raise the threshold over time so the body can leverage the more efficient aerobic energy system longer. Work is intended to be at an intensity below or just on the border between aerobic and anaerobic processes.

Basic Erg Workouts: *A balanced selection of each type will help improve your rowing fitness.*

STEADY STATE (U2 & U1): Base of the pyramid. We'll do the majority of meters in this category

- U1 – medium intensity (72-80% HRmax); U2 – low intensity (65-75% HRmax)
- U1 - 45-60 minute workout; U2 – 60-100 minutes
- Lower heart rate (U1 ~150-170, but varies by gender and age; U2 ~140-150)
- If multiple pieces are completed, rest time should be 10% of the work time (i.e. if you are doing 10-minute pieces, you take 1-minute rest; 20-minute pieces, 2 minutes rest; etc.)
- If done on an erg, the stroke rate is 20-24 (U1); 16-20 (U2)
- If you know your 2k split time, these workouts should be done at 2k split + 20 (ex: 2:10 plus 20 seconds, = 2:30) for U2 and 2k split +15 for U1
- Steady state can be substituted for by running, swimming, cycling, etc. If you want to do some cross training, it is best to substitute your steady state workouts so that you can do the harder workouts on the erg.

ANAEROBIC THRESHOLD (AT): Next level up the pyramid

- Approximately 6,000 to 12,000 meters of work or approximately 30-45 minutes of work
- Higher heart rate (often 160-180, but varies by gender and age)
- Usually done in 2 or 3 pieces (i.e. 3 x 3k) and has 50% rest time (i.e. if it takes you 12 minutes for a 3k, set the rest for 6 minutes)
- Stroke rates should be 24-28 strokes per minute
- If you know your 2k test split time, these workouts should be done at 2k split + 10

LONG INTERVAL (TR1): High intensity pieces that prepare you for sprint season

- Approximately 8,000 meters of work or approximately 25 minutes of work
- Higher heart rate (often 170+, but varies by gender and age)
- Usually done in 4 or 5 pieces (i.e. 4 x 2k or 5 x 5 minutes) with 100% rest time (i.e. if a 2k takes you 8 minutes, set 8 minutes of rest)
- Stroke rates should be 26-30 strokes per minute
- If you know your 2k test split, these workouts should be done at 2k split + 4

SHORT INTERVAL (TR2): Top of the pyramid to increase maximum power and speed

- Approximately 15-20 minutes of work
- Highest heart rate (180+, but varies by gender and age)
- Usually done in many short pieces (i.e. 8x500) with 200% rest time (if 500 meters takes you 2 minutes, then set 4 minutes rest)
- Stroke rates should be 28-34 strokes per minute
- If you know your 2k test split, this workout should be at less than your 2k split

Sample Erg Workouts (we'll include others)

STEADY STATE	ANAEROBIC THRESHOLD	LONG INTERVAL	SHORT INTERVAL
4 x 10', 1' rest	2 x 3k, 7' rest	4 x 5', 5 rest	3 x (5 cycles of 1' on/1' off), 5' rest
2 x 20', 2' rest	2 x 4k, 9' rest	6 x 4', 4' rest	6 x 500, 4' rest
40 minutes	3 x 3k, 7' rest	4 x 2k, 8' rest	8 x 500, 5' rest
3 x 20', 2' rest	3 x 4k, 9' rest	5 x 1500, 7' rest	3 x (8 cycles of 1' on 1' off), 6' rest
2 x 30', 3' rest	10k	4 x 1k, 4' rest	
4 x 20', 2' rest	12k		
50 minutes			

Example: 4 x 10', 1' rest = 4 repetitions of 10 minutes of rowing with 1 min rest between reps. Over time select the longer more intense pieces for each workout.

Weekly Workout Plan

We recommend that you train 5 times per week following the general outline below. The calendar reflects our intent to do U, AT, and TR workouts together on the ergs leaving 1 (or 2) of the U workouts to occur "out of class." Doing something 6 days a week would be fine, but plan on at least one full day of rest.

5 workouts per week

- Day 1 - Steady State (U1)
- Day 2 - Long Interval or Short Interval (TR1 or TR2)
- Day 3 - Steady State/Cross Train (U2)
- Day 4 - Anaerobic Threshold (AT)
- Day 5 - Steady State (U1)

To get started we've put together the training calendar below based on 4 structured workouts per week and 1 (or 2) outside "cross training" activities. The calendar also includes dates for events like the Mid-Atlantic Erg sprints.

We'll provide supplemental information on weight-room activity and descriptions of useful exercises and body circuits.

Stretching is integral to this plan – attached is a handout from Concept 2 that outlines some good stretches.

Concept 2 Holiday Challenge – 26 Nov-24 Dec (100 or 200K)

Mid-Atlantic Erg Sprints looks like it will be 17/18 Feb (Sat/Sun) – Junior events on Sat ... optional, but encouraged; we will also plan to participate in a Prince William Rowing Club (PWRC) Erg Sprint event again this year ... stay tuned.

November 2017

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
<div style="background-color: #d9e1f2; padding: 5px; text-align: center;">At School</div> <div style="background-color: #fce4d6; padding: 5px; text-align: center;">Outside of School</div>	<div style="border: 2px solid #0070c0; padding: 10px;"> <p>Note: Strength Training and Tabata references are place-keepers for the off-erg strength and conditioning component. Strength training will involve weight room activity; Tabata can be viewed as high intensity body circuits. Erg activity is intended to provide a top-level plan for the rowing coaches ... steady state activity vs. anaerobic activity, 2K days, 4K days, etc.</p> <p>The attachments to this plan include body circuit examples and some rowing related stretching.</p> </div>					4	
5	6	<div style="border: 2px solid #0070c0; padding: 10px;"> <p>Those new to rowing should review the erg/rowing technique video at: http://www.concept2.com/indoor-rowers/training/technique-videos</p> </div>					11
<div style="border: 2px solid #c00000; padding: 5px; background-color: #fce4d6; text-align: center;"> Red Period (no coaching contact 6-15) </div>						Commit to start working out today - 30 Min jog & stretch →	
12 Rest	13 30 Minute Jog & Stretch Body Circuit - A	14 30 Minute Jog & Stretch Body Circuit - B	15 30 Minute Jog & Stretch Body Circuit - C	16 Kickoff Day Discuss Program & Recover Ergs	17 Steady State (U1) ~ 45 min Weight Room Orientation	18 Cross Train Steady State (U2) ~ 60 min	
19 Rest	20 Steady State (U1) ~ 45 min <div style="border: 1px solid black; padding: 5px; text-align: center;"> Baseline Fitness Testing 1 min, 500m, Max Power (Watts) </div>	21 Anaerobic threshold (AT)	22 Cross Train Steady State (U2) ~ 60 min	Final Glasgow Session 23 Thanksgiving Holiday Concept 2 Holiday Challenge Starts	24 Optional Activity - Do something to burn off yesterday's dinner	25 Cross Train Steady State (U2) ~ 60 min	
26 Rest	27 Steady State (U1) ~ 45 min Tabata	28 Baseline 2K Erg Test 😊 Strength Training	29 Cross Train Steady State (U2) ~ 60 min	30 Long Interval (TR1) Tabata →	USRowing Annual Convention (Sarasota, FL) →		


December 2017

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<div style="background-color: #ADD8E6; padding: 5px; margin-bottom: 5px;">At School</div> <div style="background-color: #FFDAB9; padding: 5px;">Outside of School</div>				USRowing Annual Convention	1 Steady State (U1) ~ 45 min Strength Training	2 Cross Train Steady State (U2) ~ 60 min
3 Rest	4 Steady State (U1) ~ 45 min Tabata	5 Long Interval (TR1) Strength Training	6 Cross Train Steady State (U2) ~ 60 min	7 4K Erg Anaerobic threshold (AT) Tabata Nutrition101	8 Steady State (U1) ~ 45 min Strength Training	9 Cross Train Steady State (U2) ~ 60 min
10 Rest	11 Steady State (U1) ~ 45 min Tabata	12 2K Erg Short Interval (TR2) Strength Training	13 Cross Train Steady State (U2) ~ 60 min	14 Anaerobic threshold (AT) Tabata	15 Steady State (U1) ~ 45 min Strength Training	16 Cross Train Steady State (U2) ~ 60 min
17 Rest	18 Cross Train Steady State (U1) ~ 60 min Body Circuit A	19 Cross Train Steady State (U2) ~ 60 min Body Circuit B Optional	20 Cross Train Steady State (U1) ~ 60 min Body Circuit C	21 Cross Train Steady State (U2) ~ 60 min Body Circuit A	22 Cross Train Steady State (U1) ~ 60 min Body Circuit B	23 Cross Train Steady State (U2) ~ 60 min Concept 2 Holiday Challenge -
24 Rest Christmas Holiday	25 Rest	26 Cross Train Steady State (U2) ~ 60 min Body Circuit C	27 Cross Train Steady State (U1) ~ 60 min Body Circuit A	28 Cross Train Steady State (U2) ~ 60 min Body Circuit B	29 Cross Train Steady State (U1) ~ 60 min Body Circuit C	30 Cross Train Steady State (U2) ~ 60 min

January 2018

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<div style="background-color: #ADD8E6; padding: 5px; text-align: center;">At School</div> <div style="background-color: #FFDAB9; padding: 5px; text-align: center;">Outside of School</div>	1 New Year's Day Holiday	2 Short Interval (TR2) Strength Training	3 Cross Train Steady State (U2) ~ 60 min Body Circuit - C	4 4K Erg Anaerobic threshold (AT) Tabata	5 Steady State (U1) ~ 45 min Strength Training	6 Cross Train Steady State ~ 60 min
7 Rest	8 Steady State (U1) ~ 45 min Tabata	9 2K Erg Strength Training	10 Cross Train Steady State (U2) ~ 60 min	11 Long Interval (TR1) Tabata	12 Steady State (U1) ~ 45 min Strength Training	13 Cross Train Steady State ~ 60 min
14 Rest	15 Cross Train Steady State (U1) ~ 45 min Martin Luther King Day Holiday	16 Short Interval (TR2) Strength Training	17 Cross Train Steady State (U2) ~ 60 min	18 4K Erg Anaerobic threshold (AT) Tabata	19 Steady State (U1) ~ 45 min Strength Training	20 Cross Train Steady State ~ 60 min
21 Rest	22 Steady State (U1) ~ 45 min Tabata	23 2K Erg Strength Training	24 Cross Train Steady State (U2) ~ 60 min	25 Long Interval (TR1) Tabata	26 Steady State (U1) ~ 45 min Strength Training	27 Cross Train Steady State ~ 60 min
28 Rest	29 Steady State (U1) ~ 45 min Tabata	30 Short Interval (TR2) Strength Training	31 Cross Train Steady State (U2) ~ 60 min			

February 2018

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Rest		-		1 4K Erg Anaerobic threshold (AT) Tabata	2 Steady State (U1) ~ 45 min Strength Training	3 PWRC HS Erg Sprints 2:00-6:00 pm (arrive 2 hours prior to race)
4 Rest	5 Steady State (U1) ~ 45 min Tabata	6 2K Erg Test Strength Training	7 Cross Train Steady State (U2) ~ 60 min	8 Short Interval (TR2) Tabata	9 Steady State (U1) ~ 45 min Strength Training	10 Move Shells - Sandy Run to Lake Barcroft (Tentative)
11 Rest	12 Steady State (U1) ~ 45 min <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">Fitness Testing 1 min, 500m, Max Pwr (Watts)</div>	13 Anaerobic threshold (AT)	14 Cross Train Steady State (U2) ~ 60 min 	15 Anaerobic threshold (AT) Tabata	16 Steady State (U1) ~ 45 min Strength Training	17 Mid-Atlantic Erg Sprints (Day 1) http://www.ergs
18 Rest Mid-Atlantic Erg Sprints	19 First Day - On-Water Practice Lake Barcroft (may move time window)	20 On-Water Practice Lake Barcroft	21 Cross Train Steady State (U2) ~ 60 min	22 On-Water Practice Lake Barcroft	23 On-Water Practice Lake Barcroft	24 On-Water Practice Lake Barcroft
25 Rest	26 On-Water Practice Lake Barcroft	27 On-Water Practice Lake Barcroft	28 <div style="border: 1px solid black; padding: 5px;"> <ul style="list-style-type: none"> • All paperwork complete before going on the water (19 Feb) • Lightweight Program Initiation this Month (1 wk<, 3 wk> season start) </div>			