

GEORGE MASON UNIVERSITY
School of Recreation, Health, and Tourism

RECR 118 – 003
Aerobic Conditioning (1)

Fall 2017
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GEORGE MASON UNIVERSITY
School of Recreation, Health, and Tourism

RECR 118 (003) — Aerobics and Basic Conditioning (1)
1 Credit, Fall 2017
MW 12:00-1:15 Linn Gym Fairfax Campus

Faculty

Professor: Dr. Fred Schack
Office Hours: by appointment
Office Location: RAC 2108
Phone: 703.993.8522
Email: fschack@gmu.edu

Course Overview None

Course Delivery

Method this course will be delivered using a face-to-face format.

Learner Outcomes or Objectives

At the completion of this course students should be able to:

1. Use the equipment appropriately.
2. Explain the purpose of and demonstrate a circuit weight training program.
3. Design a fitness plan that meets their current level of fitness.
4. Develop an appreciation for healthy lifestyles and lifetime fitness by stating what you will do in terms of your personal fitness once you leave this class.

Professional Standards

N/A

Required Texts

None

Handouts

ToxicBrew (~ 17") (Copy and paste each link into your browser.) Part 1 – <https://nontoxicfamily.wordpress.com/toxic-brew>; Part 1 – <https://www.youtube.com/watch?v=X4yxp7ZemjQ>

Obesity and Health Effects (~ 5")

- http://www.youtube.com/watch?v=wOGV6QA3_hQ (2")
- http://www.youtube.com/watch?NR=1&v=VHSDIKw8_ss&feature=endscreen (3")

Vitamin D & A (attached) – Go to end of Lecture 1

OPTIONAL

FLU Vaccine – yes or no? (My answer is NO – please check these sites for research based studies)

1. <http://articles.mercola.com/sites/articles/archive/2008/11/18/do-flu-shots-work-ask-a-vaccine-manufacturer.aspx>
2. <http://www.drdauidwilliams.com/why-you-should-not-get-the-flu-shot/>

3. <http://articles.mercola.com/sites/articles/archive/2012/11/06/flu-vaccine-efficacy.aspx>
HPV Vaccine: <http://articles.mercola.com/sites/articles/archive/2008/10/25/prominent-scientist-warns-of-hpv-vaccine-dangers.aspx>

Homeopathic Medicines:

Do homeopathic medicines really work? Yes, they do, but be careful where/how they're purchased. Dr. Whitaker explains what they are, how they compare with prescription meds as well as sources.
<http://www.drwhitaker.com/homeopathic-remedies-do-they-work/>

Statin Drug Issues:

The Dangers of Statin Drugs: <http://statins.mercola.com/>

Does High Cholesterol REALLY Cause Heart Disease? An Interview with Uffe Ravnskov, MD, PhD
(<http://articles.mercola.com/sites/articles/archive/2009/12/05/does-high-cholesterol-really-cause-heart-disease.aspx>)

S. Sultan and N. Hynes, "The Ugly Side of Statins. Systemic Appraisal of the Contemporary Un-Known Unknowns," *Open Journal of Endocrine and Metabolic Diseases*, Vol. 3 No. 3, 2013, pp. 179-185. doi:
<http://www.scirp.org/journal/PaperInformation.aspx?PaperID=34065#.VbFWEvIVhBc>

900 Studies Show Statin Drugs are Dangerous:

(<http://articles.mercola.com/sites/articles/archive/2009/02/21/900-studies-show-statin-drugs-are-dangerous.aspx>)

Depression – This is about a 5” personal life overview showing how one might handle the “down times” in one’s life

<http://www.youtube.com/watch?v=MslbhDZoniY>

Chemicals in Baby Products - <http://www.treehugger.com/health/7-chemicals-and-toxins-avoid-when-buying-baby-products.html>

What’s in McDonald’s Products – See Lecture 1

Course Performance Evaluation

Students are expected to submit all assignments on time in the manner outlined by the instructor (e.g. Blackboard, Tk20, hard copy)

Assignments and Examinations

Assignments – to receive credit, they **MUST** be handed in on the **DUE DATE** at the **beginning of class** unless other directed. All other time will result in a “0.”

Absence – if you’re absent, e-m or FAX (703-993-4425) the assignment **PRIOR TO CLASS** on the day it is do.

Written – (20-Question Multiple Choice Exam from Lectures 1-3, highlighted addendum on sugar, & Dropbox video – <https://www.dropbox.com/home?preview=New+Science.VOB>)

Contract (last page)

Fitness Test & Body Mass Index [done twice (attached on pg. 6)]

Target Heart Zone Worksheet (pg. 7-8, possibly 9 depending on your print margins)

Weight Training Fitness Plan (Must be **TYPED DOUBLE-SPACED**; outline on pg. 10)

Workout Journal (handout) (2x/week, handed in at the end of the term)

Practical Assessment on weight training techniques

Other Requirements

- Attendance / Lab Exercises:
- 10 points will be given each day with a deduction of 1 point for each five-minutes that a student is late. Students must attend the entire class period and participate in the daily activities to receive full credit for the class. Assuming the total possible points available is 140, your lab exercise score will be the number of points you gained each day divided by 140 and then multiplied by 65%. If there are 13 class periods, then the total is 130 and the math is done the same.
 - If you attend, are on time, each day, and participate as scheduled, you'll receive the full 10 points for that day. **Unexcused absences, late arrivals, and lackadaisical performance** which result in daily point reductions could significantly affect the grade.
- Students with injuries or pre-existing conditions that may affect performance must inform the instructor.
- Most of the communication will be through GMU e-mail.
- Dress Code / Lecture / Cell Phones
- Participants must wear athletic shoes and non-restrictive clothing for all activity classes. Jeans or opened-toed shoes must not be worn on activity days. Unless otherwise indicated, participation will occur after the lectures 2-4.
 - Cell Phones – use during class may result in half-day loss of participation points and possibly a lower course grade.
- Pre-Existing Conditions – *Students with injuries / pre-existing conditions that may affect performance must inform the instructor.*

Course Performance Evaluation Weighting

Written Exam – 20%

Contract – 1%

Fitness Test & Body Mass Index – 2% (1% is given each time it is due.)

Target Heart Zone Worksheet – 3%

Aerobic Training Fitness Plan – 4%

Workout Journal – 4%

Attendance / Lab Exercises – 65%

Practical Assessment – 1%

Grading Scale

A	= 90 – 100	B+	= 88 – 89.9	B	= 84 – 87.9	B-	= 80 – 83.9
C+	= 78 – 79.9	C-	= 70 – 73.9	D	= 60 – 69.9	F	= 0 – 59.9

Professional Dispositions

Students are expected to exhibit professional behaviors and dispositions at all times.

Class Schedule

DAY	TOPIC	READINGS / ASSIGNMENT DUE
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DAY	TOPIC	READINGS / ASSIGNMENT DUE
1	1st Mtg in RAC Cage Gym Bleachers upstairs ; Syllabus and Introduction to Class; Target Heart Zone, Workout Journal – Jan 24	Bring syllabus ; Fitness Test; Begin Workout Journal
2	Meet in RAC Cage Gym Bleachers; Lecture 1 – Weight Management, Nutrition & Environmental Affects on Disease & Agin ; Stretch, WT & Aerobic Activity – Jan 26	Bring Lecture 1; Contract Due (1%) and Initial Fitness Evaluation: Fitness Test, BMI Due (1%)
3	Meet in RAC Cage Gym Bleachers Lecture 2: Flexibility, Muscle Strength, & Muscle Endurance – Jan 31	Target Heart Zone (THZ) Worksheet Due (3%) Bring Lecture 2
4	Meet in RAC Cage Gym Bleachers Lecture 3: Cardiovascular Endurance ; Stretch, WT & Aerobic Activity – Feb 2	Bring Lecture 3
5	Stretch, WT & Aerobic Activity – Feb 7	
6	Stretch, WT & Aerobic Activity – Feb 9	
7	Stretch, WT & Aerobic Activity – Feb 11	
8	Stretch, WT & Aerobic Activity – Feb 16	
9	Stretch, WT & Aerobic Activity – Feb 18	
10	Stretch, WT & Aerobic Activity – Feb 23	
11	Stretch, WT & Aerobic Activity – Feb 25	
12	Stretch, WT & Aerobic Activity – Mar 2	Weight Training Fitness Plan Due (4%)
13	Stretch, WT & Aerobic Activity – Mar 7	Workout Journal Due (4%)
14	RAC Cage Gym Bleachers FINAL WRITTEN EXAM & FINAL Fitness Evaluation (Sit-&-Reach, Sit-Ups, 1.5 Mi Run & BMI) – Mar 9	Final Fitness Evaluation Due (1%)

ASSIGNMENTS

1. – Contract **(1%)** Fitness Evaluation (Sit-&-Reach and 1.5 mi run time) & Initial BMI **Due (1%)**
2. – Target Heart Zone (THZ) Worksheet **Due (3%)**
3. – Weight Training Fitness Plan **Due (4%)**
– Workout Journal **Due (4%)**
4. – Final Fitness Evaluation **Due (1%)**

Core Values Commitment

The College of Education and Human Development is committed to collaboration, ethical leadership, innovation, research-based practice, and social justice. Students are expected to adhere to these principles: <http://cehd.gmu.edu/values/>.

GMU Policies and Resources for Students

Policies

Students must adhere to the guidelines of the Mason Honor Code (see <http://oai.gmu.edu/the-mason-honor-code/>).

Students must follow the university policy for Responsible Use of Computing (see <http://universitypolicy.gmu.edu/policies/responsible-use-of-computing/>).

Students are responsible for the content of university communications sent to their Mason email account and are

required to activate their account and check it regularly. All communication from the university, college, school, and program will be sent to students **solely** through their Mason email account.

Students with disabilities who seek accommodations in a course must be registered with George Mason University Disability Services. Approved accommodations will begin at the time the written letter from Disability Services is received by the instructor (see <http://ods.gmu.edu/>).

Students must follow the university policy stating that all sound emitting devices shall be silenced during class unless otherwise authorized by the instructor.

Campus Resources

Support for submission of assignments to Tk20 should be directed to tk20help@gmu.edu or <https://cehd.gmu.edu/aero/tk20>. Questions or concerns regarding use of Blackboard should be directed to <http://coursesupport.gmu.edu/>.

The George Mason University Writing Center staff provides a variety of resources and services (e.g., tutoring, workshops, writing guides, handbooks) intended to support students as they work to construct and share knowledge through writing (see <http://writingcenter.gmu.edu/>).

The George Mason University Counseling and Psychological Services (CAPS) staff consists of professional counseling and clinical psychologists, social workers, and counselors who offer a wide range of services (e.g., individual and group counseling, workshops and outreach programs) to enhance students' personal experience and academic performance (see <http://caps.gmu.edu/>).

The George Mason University Office of Student Support staff helps students negotiate life situations by connecting them with appropriate campus and off-campus resources. Students in need of these services may contact the office by phone (703-993-5376). Concerned students, faculty and staff may also make a referral to express concern for the safety or well-being of a Mason student or the community by going to <http://studentsupport.gmu.edu/>, and the OSS staff will follow up with the student.

For additional information on the College of Education and Human Development, please visit our website <https://cehd.gmu.edu/>.

**INITIAL FITNESS EVALUATION & GOAL (1%)
Body Mass Index, Sit-Ups, Sit-and-Reach, & 1.5 Mile Run
DUE –**

Name: _____

Weight: _____

Height in inches: _____

BMI (Weight x 705 divided by height in inches squared) = _____

Chronic Disease Risk _____ (see CLASSIFICATIONS BELOW!!)

Example: 150 Man who is 5'7.5" (67.5") Tall

$$150 \times 705 = 105750 / 67.5^2 (4556.25) = 23.2$$

1.5 Mile Run _____

Sit-ups _____

Sit-&-Reach _____

YOUR ONE MAJOR GOAL FOR THIS CLASS:

**FINAL FITNESS EVALUATION & GOAL (1%)
Body Mass Index, Sit-Ups, Sit-and-Reach, & 1.5 Mile Run
DUE – Mar 9**

Name: _____

Weight: _____

Height in inches: _____

BMI (Weight x 705 divided by height in inches squared) = _____

Chronic Disease Risk: _____ (see CLASSIFICATIONS BELOW!!)

1.5 Mile Run _____

Sit-ups _____

Sit-&-Reach _____

WAS YOUR MAJOR GOAL ACCOMPLISHED?:

BMI CLASSIFICATIONS

BMI	Chronic Disease Risk	Classification
<20.00	Moderate to Very High	Underweight
20-21.99	Low	Acceptable
22.00-24.99	Very Low	Acceptable
25.00-26.99	Low	Overweight
27.00-29.99	Moderate	Overweight
30.00-39.99	High	Obese

FOUR-PART, ROM NUM'S I-IV) TARGET HEART ZONE (Training Intensity) WORKSHEET

(3%)

DUE – Jan 31

NAME _____ DATE _____ COURSE _____

I. INTENSITY OF EXERCISE

1. Estimate your own maximal heart rate (MHR)

$$\text{MHR} = 208 \text{ minus } .7 (\text{age}) [\text{ex: } 208 - .7 \times 20 (= 14)] = 194$$

$$\text{MHR} = 208 - \underline{\hspace{2cm}} (.7 \times \text{age}) = \underline{\hspace{2cm}} \text{BPM}$$

2. Resting Heart Rate (RHR) = _____ BPM

3. Heart Rate Reserve (HRR) = MHR – RHR

$$\text{HRR} = \frac{\hspace{2cm}}{\text{MHR}} - \frac{\hspace{2cm}}{\text{RHR}} = \underline{\hspace{2cm}} \text{BPM}$$

4. Training Intensities (TI) = HRR x TI + RHR

$$40\% \text{ TI} = \underline{\hspace{2cm}} (\text{HRR}) \times .40 = \underline{\hspace{2cm}} + \frac{\hspace{2cm}}{\text{RHR}} = \underline{\hspace{2cm}} \text{BPM}$$

$$50\% \text{ TI} = \underline{\hspace{2cm}} (\text{HRR}) \times .50 = \underline{\hspace{2cm}} + \frac{\hspace{2cm}}{\text{RHR}} = \underline{\hspace{2cm}} \text{BPM}$$

$$60\% \text{ TI} = \underline{\hspace{2cm}} (\text{HRR}) \times .60 = \underline{\hspace{2cm}} + \frac{\hspace{2cm}}{\text{RHR}} = \underline{\hspace{2cm}} \text{BPM}$$

$$85\% \text{ TI} = \underline{\hspace{2cm}} (\text{HRR}) \times .85 = \underline{\hspace{2cm}} + \frac{\hspace{2cm}}{\text{RHR}} = \underline{\hspace{2cm}} \text{BPM}$$

5. Cardiorespiratory Training Zone (CTZ). The optimum CTZ is found between 60% and 85% training intensities. Those individuals who have been physically inactive or are in poor or fair cardiorespiratory fitness should work between 40% and 50% TI during the first few weeks of an exercise program.

$$\text{CTZ: } \underline{\hspace{2cm}} (60\% \text{ TI}) \text{ to } \underline{\hspace{2cm}} (85\% \text{ TI})$$

II. MODE OF EXERCISE

Select those activities or combination of *aerobic* activities that you have enjoyed. These are activities that are *continuous, rhythmical, and with a sustained* a heart rate in a CTZ for at least 20 minutes. These would NOT include soccer, weight lifting, or any other “short burst” activity.

1. _____ 2. _____ 3. _____

4. _____ 5. _____ 6. _____

III. CARDIORESPIRATORY EXERCISE PROGRAM (CEP)

When participating in a CEP for 8-12 weeks you may well experience a significant reduction in your resting heart rate between 10-20 BPM. In order to determine your heart rate you will need to know what your pulse count is for 6 seconds; however, until you can feel your pulse and count it without missing beats, you should begin by counting your pulse for 15 seconds (and multiplying by 4 = BPM), then 10 seconds (and multiplying by 6 = BPM), and finally for 6 (and multiplying by 10 = BPM). You need to determine what the 6-sec pulse count is that will give you the Training Intensity (TI) for each of the Training Intensities (TI's) below, so you'll know where you are in terms of TI at anytime you check your pulse. If you're not sure how to do this, let me know **BEFORE** the assignment is due.

<i>Training Intensity</i>	<i>Heart Rate (BPM)</i>	<i>Determine 6-Second Pulse Count</i>
Between 40% and 50%	_____ to _____ (Found on previous page)	_____ to _____
Between 50% and 60%	_____ to _____ (Found on previous page)	_____ to _____
Between 60% and 85%	_____ to _____ (Found on previous page)	_____ to _____

IV. BRIEFLY STATE YOUR EXPERIENCES AND FEELINGS REGARDING AEROBIC EXERCISE (MUST TYPE below.)

WEIGHT TRAINING / (HEALTH) FITNESS PLAN (4%)

DUE – Mar 2

GENERAL. Please note that this is a *P-L-A-N* for **future use**, not what will occur by the end of this class, but what you would do to continue your fitness activity that you could use and/or share with friends and family should they want to improve their health and fitness

This plan should be one that you develop using information gathered in this class as well as any other outside sources (health related information) that would help you stay fit for the rest of your life. It should consider your particular choice of weight training exercise (it may be free weights or other resistance training apparatus) in addition to a couple of aerobic-type exercises that you believe you can do without restriction.

You may choose any form of weight training, but it should involve the total body, not just one body area such as upper body alone. In terms of aerobic activity, it should involve more than five minutes of continuous rhythmical exercise that raises the heart rate to at least 40% TI and eventually progress to 60-85%.

There will be other components to assist this plan that are not necessarily fitness oriented, but *health* oriented, that will improve your body's health and that can have a significant effect on your fitness. Some of those are indicated below.

The plan **MUST** be **TYPED** (handwritten assignment will receive a "0"), contain the following listed below, but may contain more information and be **DOUBLE SPACED** (if not double-spaced you can only receive 2.5 points).

(1Pt.) CURRENT STATE OF FITNESS? (Explain where you are and how long you have been there. Also **MUST INCLUDE** the fitness measurements and BMI you received the first week of class.)

(1Pt.) GOAL(S)? What goal or goals do you have that you would like to see met by the end of a particular block of time (your choice)? These may include, but not be limited to, weight loss, ability to lift more weight and/or more repetitions at lower weights, to last longer on walks, runs, and hikes; fat loss (which may occur without weight loss), stress reducing activities, etc.

(.5 Pt.) LIST OF ACTIVITIES AND HOW YOU WOULD MONITOR THEM. State the kinds of weight training activities you might do (free weights, stationary weights, your own body as resistance, etc.), list them, then select one or more that are reasonable for you to do. State how you would monitor these activities if you needed to do so for medical reasons, i.e. your physician wants to know about your physical activity program. You should also state what aerobic activity you do following your weight training to decrease the lactic acid build-up that occurs with an anaerobic activity like weight training.

(.4Pt.) RECORD OF YOUR CURRENT WEIGHT THAT YOU ARE LIFTING IN CLASS ON EACH STATION FOR POWER AND WHAT IT WOULD BE FOR ENDURANCE (50% of your strength weights).

List the current strength weight you lift and what your endurance training weight would be. Remember, power weight is weight you cannot lift more than 6 times per set; endurance weight is 13 or more repetitions per set.

(1Pt.) RECORD YOUR TRAINING INTENSITY (TI) AND HR. State your TI and what your most recent HR had been before, immediately after, and 30 minutes after your exercise bout.

(1Pt.) OTHER? Besides weight training activity, any other lifestyle choices that can affect your overall health such as diet, lack of rest, stress management, and relationships with friends and/or other "stressors" that cause you to stay up late or make it difficult to sleep. Be aware that when you consider diet, this doesn't necessarily mean calorie restriction, but maybe making better choices in the food that you eat. You may eat more and lose more, especially if you choose higher fiber foods and eliminate sugar choices such as sodas and fruit juices.

STATIONS & ACTIVITY

Pre-Activity Stretch – Low Back & Buttocks

Stations – are listed by numbers as they occur on the stationary lifting equipment

2 – Squat Press & Stretch (S)

3 – Leg / Hamstring Curl & Stretch (S)

5 – Hip Adductor & Stretch (S)

6 – Calf Press & Stretch (S)

8 – Abdominal Press & Stretch (S)

9 – Back Extension & Stretch (S)

FREE WEIGHT ROOM

Forearm Reverse Curl & Stretch

- back of hand/knuckles face ceiling
- keep elbows against side for entire movement

10 & 11 – CABLE MACHINES

Golf Swing: Low-High

12 – Chest/Bench Press & Stretch (S)

14 – Reverse Fly & Stretch (S)

15 – Lat Pull Down & Stretch (S)

AEROBIC ACTIVITY – 5-15” (at end or beginning of class to find the best personal arrangement for each student as part of weight training; this will vary depending on the size of the class.)

WEIGHT TRAINING TECHNIQUE

LIFTING

1. Set the weight to what you “believe” you can lift no more than 15 times. Note whether it was too light, that is, you could have lifted it 20 times or more; whether it was too heavy, that is, you could not lift it more than 12 times. Depending on how hard or easy it, was put 1-3 “+’s” if you need to add weight or 1-3 “-’s” if you need to reduce the weight the next time.
2. Make sure you are in the correct position.
3. Start the position with the most stretch on the muscles to be used and go to the absolute end of the lift. Don’t reduce the beginning and/or end just to get the weight lifted.
4. Allow the weight to come back slow enough so that it does NOT hit the stack hard.
5. Partner should watch and let person lifting know if the weight needs to be “pushed” a little more to completion; **assist** as necessary.

STRETCHING

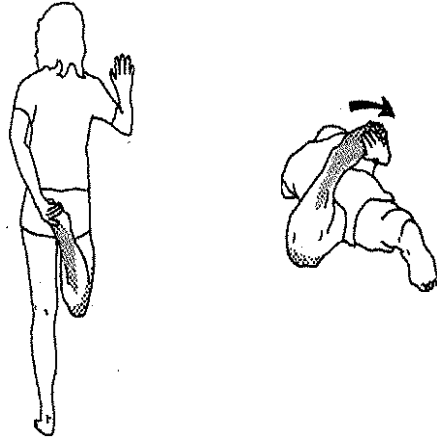
1. If you forget the stretch, don’t worry about it. Note the position of the muscle at the START of the lift and increase the starting position of that muscle group. So, if my arm is at my side and I raise my hand/arm straight out in front of me, that is, to flex my shoulder, then I would straighten (extend) it up and to the rear for the stretch. (There is a stretching file attached after this page on pages 11-14.)
2. Do TWO stretches and hold each one for two deep breaths.

AEROBIC WORK

1. Eventually, you will decide whether you would rather do aerobic work of 10-15” at the beginning or the end of the workout when you start training on your own. Either is fine and we will be doing them at both times throughout the course so you can determine which is best for you. (See page 17.)
2. The aerobic bout at the beginning or end will use the peak fitness training regimen which consists of 1.5 minutes of an easy jog followed by a 30-second bout of running hard. This may be done using any of the following: stationary bike, recumbent bike, stepper, elliptical, a combination of any of these, or any other activity that keeps the heart rate at a **steady rhythmical pace**. After taking the class you may choose to jog inside and/or outside before or after class.
3. Before & After – Do TWO stretches of the quadriceps, hamstrings, and calf, holding each one for two DEEP breaths.

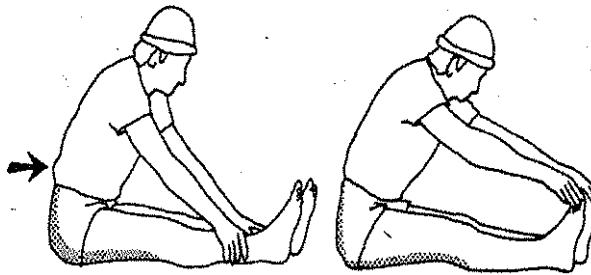
STRETCHING FORM & SEQUENCE FOR THE WEIGHT TRAINING STATIONS

#2 – THIGH / QUADRICEPS STRETCH

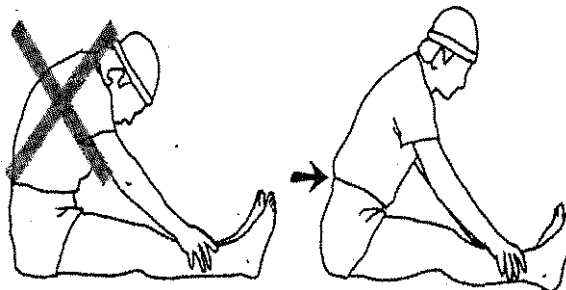


If you have knee problems, be careful NOT to COMPRESS the knee.

#3 – THIGH / HAMSTRING STRETCH

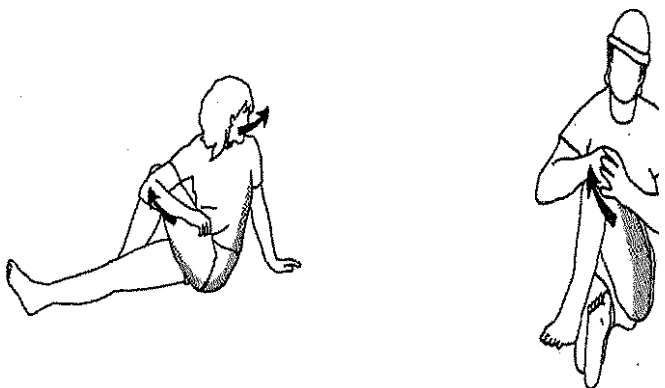


DON'T DO IT THIS WAY – BELOW

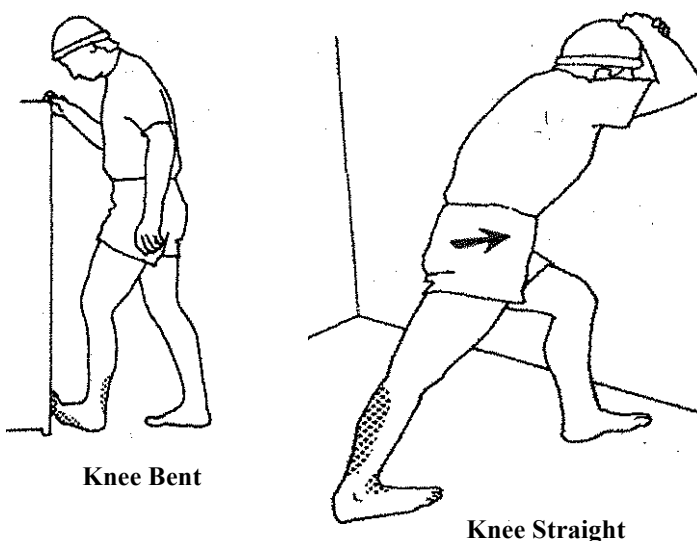


1

#5 – THIGH / ABDUCTOR STRETCH



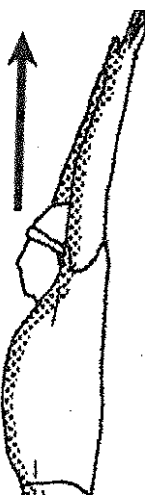
#6 – LOWER LEG / CALF STRETCH



Knee Bent

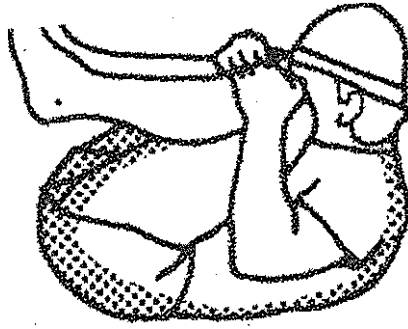
Knee Straight

#8 – TORSO / ABDOMINAL STRETCH

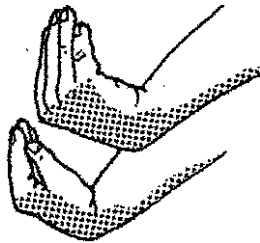


Reach overhead and, if possible, w/o getting dizzy, drop the head back as if to look at the sky.

#9 – TORSO / BACK STRETCH



FREE WTS – FOREARM STRETCH

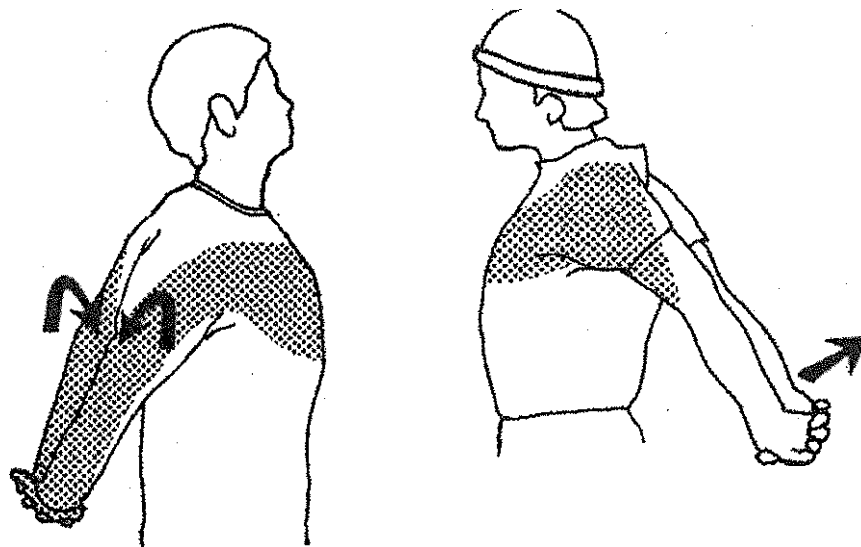


Note: Place arms down and to the rear, but keep the hands in the position above.

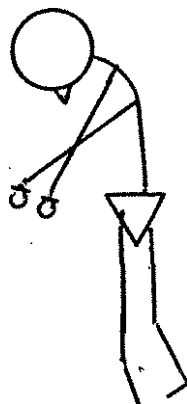
#'s 10 & 11 TORSO / ARM, SHOULDER, & UPPER BACK STRETCH FOR CABLE CROSS



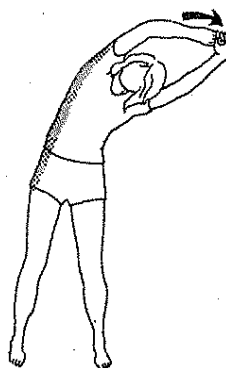
#12 – TORSO / PECTORAL (Chest) STRETCH



#14 – TORSO / (Reverse Fly) ARM, MID TO UPPER BACK & POSTERIOR SHOULDER STRETCH



#15 – TORSO / LATISSIMUS & (SOME) TRICEP STRETCH



AEROBIC ACTIVITY SEQUENCING OF INTENSITY*

WK	DAY	LVL OF INTNSY	BIKE	ELPTCL	TREADMILL	TIME	JOG	TIME
1	1	1	1.5 mile walk/jog	NA	NA	Whatever it takes	1.5 mile walk/jog	Whatever it takes
	2		Learn Circuit System	Learn Circuit System	Learn Circuit System	Learn Circuit System	Learn Circuit System	Learn Circuit System
	Lecture 1							
2	3	1	55 RPM – 1.5” 85 RPM – 30’ for first 8”	80 SPM 1.5” 100 SPM – 30’ for first 4”	3.5 MPH 2” 5.5 MPH – 30’ for 5”	8”	Walk briskly 1.5”, jog briskly 30’; repeat for first 20”	Total – 8” + Cool Down
	4	2	65 RPM – 1.5” 90 RPM – 30’ for first 8”	85 SPM 1.5” 100 SPM – 30’ for first 6”	4 MPH 2” 6 MPH – 30’ for first 6”	Finish to 11”	Jog easy 1.5”, jog briskly 30’; repeat for first 20”	11” + Cool Down
	Lecture 3							
3	5	3	70 RPM – 1.5” 95 RPM – 30’ for first 20”	90 SPM 1.5” 100 SPM – 30’ for first 6”	4.1 MPH 2” 7.1MPH – 30’ for first 8”	Finish to 12”	Jog easy 1.5”, jog briskly 30’; repeat for first 20”	12” + Cool Down
	6	3	75 RPM – 1.5” 100 RPM – 20- 30’ for first 8”	90 SPM 1.5” 105 SPM – 30’ for first 6”	4.3 MPH 2” 7.3MPH – 30’ for first 8”	Finish to 13”	Jog easy 1.5”, jog briskly 30’; repeat for first 20”	13 + Cool Down
4	7	4	80 RPM – 1.5” 105 RPM – 30’ for first 8”	90 SPM 1.5” 110 SPM – 30’ for first 7”	4.5 MPH 2” 7.5MPH – 30’ for first 8”	Finish to 13”	Jog easy 1.5”, jog briskly 30’; repeat for first 20”	13” + Cool Down
	8	4	80 RPM – 1.5” 110 RPM – 30’ for first 8”	90 SPM 1.5” 110 SPM – 30’ for first 7”	4.5 MPH 2” 7.5MPH – 30’ for first 9”	14”	Jog easy 1.5”, jog briskly 30’; repeat for first 20”	14” + Cool Down
5	9	5	80 RPM – 1.5” 110 RPM – 30’ for first 8”	90 SPM 1.5” 115 SPM – 30’ for first 7”	4.7 MPH 2” 7.7MPH – 30’ for first 9”	14”	Jog easy 1.5”, jog briskly 30’; repeat for first 20”	14” + Cool Down
	10	5	80 RPM – 1.5” 110 RPM – 30’ for first 80”	95 SPM 1.5” 115 SPM – 30’ for first 7”	5 MPH 2” 8 MPH – 30’ for first 9”	14”	Jog easy 1.5”, jog briskly 30’; repeat for first 20”	14” + Cool Down
6	11	6	80 RPM – 1.5” 110 RPM – 30’ for first 8”	105 SPM 1.5” 135 SPM – 30’ for first 7”	5.2 MPH 2” 8.2 MPH – 30’ for first 9”	14”	Jog easy 1.5”, jog briskly 30’; repeat for first 20”	14” + Cool Down
	12	7	85 RPM – 1.5” 110 RPM – 30’ for first 8”	110 SPM 1.5” 140 SPM – 30’ for first 8”	6 MPH 2” 9 MPH – 30’ for first 8”	Finish to 15”	Jog easy 1.5”, jog briskly 30’; repeat for first 20”	15” + Cool Down
7	13	7	85 RPM – 1.5” 110 RPM – 30’ for first 8”	110 SPM 1.5” 140 SPM – 30’ for first 8”	6 MPH 2” 9 MPH – 30’ for first 8”	Finish to 15”	Jog easy 1.5”, jog briskly 30’; repeat for first 20”	15” + Cool Down
	14		Final Written, Sit-&-Reach & 1.5 mi run/walk	NA	NA	Whatever it takes	1.5 mile walk/jog	Whatever it takes
	Fitness Test							

* This is a general pattern and may be altered depending on your level of fitness. Some of you may be able to reduce the “down” time and increase the fitness intensity and time; however, make sure to always “cool down” w/ a walk and stretch when you are done.

AEROBIC EXERCISE: We won’t quit straight aerobics, (even though it appears as though I am saying this, and you’re reaping greater results than before). We will finish each “Peak Burst” that will be done at the

beginning of the class for 10 with aerobic exercise to complete the total minutes each day. Jogging, using elliptical machines, stationary or recumbent bikes, treadmills, walking fast and so-forth are all examples of aerobic exercise, which will:

- 1 - increase the amount of oxygen in your blood and increase endorphins, which act as natural painkillers.**
- 2 - activate your immune system**
- 3 - help your heart pump blood more efficiently**
- 4 - increases your stamina over time.**

USE OF BIKES / ELLIPTICAL / TREADMILL – On the bikes set the Level to 1, complete the first RPM listed for 1.5” followed by the second RPM for 30’ at a brisk pace so that breathing is hard for first 10; complete the rest of the time with aerobic workout somewhere b/t hi & lo. On the elliptical SPM stands for Strides Per Minute. If any of these rates are too hard, make sure to SEE ME ASAP.

WALK / JOG – Walk the distance listed inside or outside followed with a jog for the time listed. You can also use the amount as time rather than distance. Walk more or less depending on your level of fitness. For the first 10 use the 1.5” / 30’ time blocks – walk for 1.5”, jog briskly for 20-30’ so that breathing is hard, then complete the remaining time aerobically until the total time is done or use the “Jog Column”.

COOL DOWN – walk for half the time left followed by a stretch of the quadriceps, hamstrings, and calf muscles as demonstrated in class.

PEAK FITNESS TRAINING

Peak Fitness Training occurs when you raise your heart rate up to your anaerobic threshold training zone for 20 to 30 seconds, and then you recover slowly for 90 seconds. The intensity is absolutely individual. For some it may be as simple as fast walking alternating with slow walking. For those in excellent condition you would run relatively fast for 30’ followed by an easy jog for 1.5 minutes or if on a stationary/recumbent bike, high RPM 30’ followed by moderate RPM 1.5. This is done for the first 20 minutes of an exercise bout.

Peak fitness can actually cause your growth hormone to increase naturally, without any of the expense or side effects.

How Does It Work and What is Required?

You have three different types of muscle fibers: slow, fast, and super-fast. And only ONE of these muscles will impact your production of a vital hormone called HGH, or human growth hormone, which is KEY for strength, health and longevity. High intensity burst cardio is the form of exercise that will engage these super fast fibers. They're ten times faster than slow fibers, and **this is the key to producing growth hormone!**

Are You in Somatopause (Age Related Growth Hormone Deficiency?)

As you reach your 30’s and beyond, you enter what's called "somatopause," when your levels of HGH begin to drop off quite dramatically. This is part of what drives your aging process. Often nearly everyone over 30 has dramatically abnormal levels of this important hormone because they begin leading increasingly more sedentary life styles.

Children and most animals in the wild do not run marathons or lift weights, they move at high speeds for very short periods of time and then rest. This is natural and what optimizes the production of growth hormone.

The higher your levels of growth hormone, the healthier and stronger you're going to be. And the longer you can keep your body producing higher levels of HGH, the longer you will experience robust health and strength.

Dr. Harvey Cushing discovered HGH in the form of somatotropin almost a hundred years ago. Many individuals choose to inject it, though it is a banned substance in many professional sports.

As pointed out earlier, it is not recommend doing this as the health risks and cost are in no way justifiable. Ideally, you really want your body to produce it naturally, as injecting HGH does have side effects. And the way you produce it is by exercising your super-fast muscle fibers.

Benefits of Peak Fitness Exercises

Once you regularly participate in these 20 minute exercises about twice a week, most people notice the following benefits

- **Firms your skin and reduces wrinkles**
- **Lowers your body fat**
- **Dramatically improves muscle tone**
- **Boosts your energy and sexual desire**
- **Improves athletic speed and performance**
- **Allows you to achieve your fitness goals much faster**

How to Properly Perform Peak Fitness Exercises to Increase Your Growth Hormone Levels

First of all, please remember that you can perform this with any type of exercise. While having access to a gym or exercise equipment will provide you with a larger variety of options, you don't require either. You can easily perform this by walking or running on flat ground.

You will certainly want to *work your way up to this point*, but **ultimately you want to exercise vigorously** enough so you reach your anaerobic threshold as this is where the "magic" happens that will trigger your growth hormone release.

Whatever activity you choose, by the end of your 30 second period you will NEED to reach these markers:

- **It will be relatively hard to breathe and talk because you are in oxygen debt**
- **You will start to sweat profusely. Typically this occurs in the second or third repetition unless you have a thyroid issue and don't sweat much normally.**
- **Your body temperature will rise**
- **Lactic acid increases and you will feel a muscle "burn"**

If you are using cardio equipment like an elliptical or bike, you don't need to reach any "magical" speed. It's highly individual, based on your current level of fitness; however, you know you're doing it right when you're exerting yourself to the point of typically gasping for breath, after a short burst of activity.

An added boon is that you'll save a tremendous amount of time because peak fitness will cut your hour-long cardio workout down to a total of 20 minutes or so, including your recovery time, warm-up and cool down.

The actual sprinting totals only 4 minutes!

Here's what a typical peak fitness routine might look like using a recumbent bike:

1. Warm up for three minutes

2. Exercise as hard and fast as you can for 30 seconds. You should feel like you couldn't possibly go on another few seconds
3. Recover for 90 seconds
4. Repeat the high intensity exercise and recovery 7 more times

Be mindful of your current fitness level and don't overdo it when you first start out.

If you are not in great shape and just starting this you may want to start with just two or three repetitions, and work your way up to eight, which is where the magic really starts to happen. You may need to start with just walking and when you do your 30 second bursts your legs would be moving as fast as possible without running - and your arms would be pumping hard and fast.

If you can do a peak fitness workout twice a week, and follow the dietary recommendations below, you will increase your production of growth hormone.

Dietary Recommendations to Maximize Growth Hormone Release

To maximize your growth hormone release you need to:

- Get a good night's sleep
- Avoid a high fat meal prior to exercising
- Drink plenty of water
- Eat healthy carbs (think vegetables) and high quality protein
- Optimize your vitamin D levels
- **Avoid sugar**, especially fructose – this is **ABSOLUTELY** crucial.

SUGAR - If you consume sugar or fructose, especially within two hours post-exercise, you will increase somatostatin which will in turn **obliterate the production of growth hormone!**

This is yet another example of why gulping down sports drinks that are chockfull of high fructose corn syrup can do your body more harm than good, and will just shut down your body's production of HGH and negate many of the benefits from your exercise.

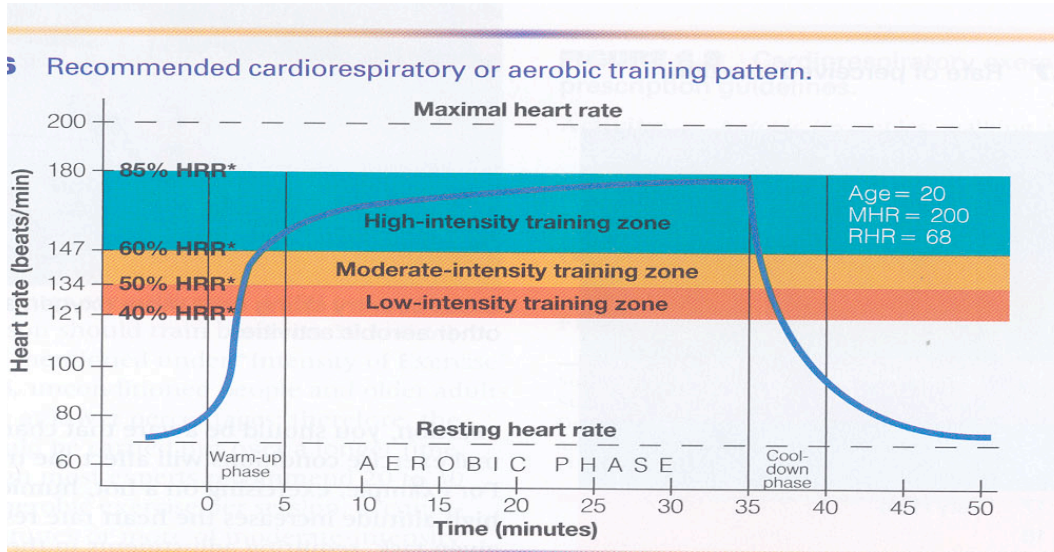
CARDIOVASCULAR TRAINING & EXERTION

The two graphs below show where you need to be to experience various training “zones” (for a 20 year-old individual) and how hard you perception is of the training you do.

Development of Aerobic Fitness

There is a *warm-up* phase in which the heart rate (HR) gradually moves into the Training Zone (TZ) for a period of 20-30 minutes. Following training, there is a *cool down* period to bring the HR back to normal.

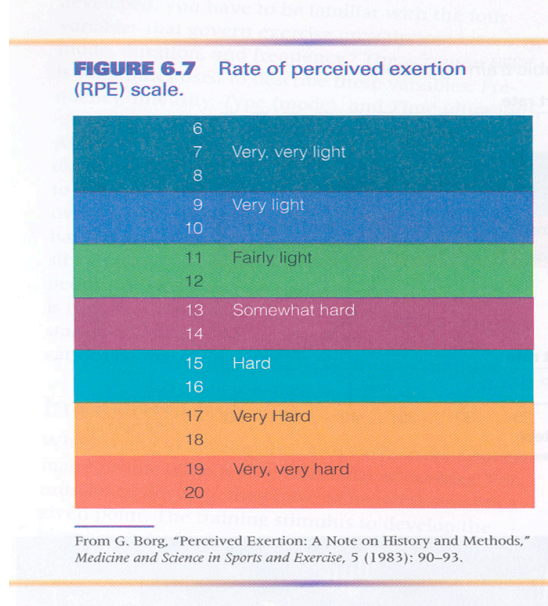
Once you begin to work in the TZ at the moderate-to-high intensity for a period of 8-12 weeks, you should experience a reduction in your *resting HR* of 10-20 beats per minute.



Rate of Perceived Exertion (PE)

This is how you *feel* about your activity at the time you finish. There is no right or wrong, it’s basically your inner perception of the zone/task you are in with the phrases given on the scale. You then may exercise at that rate of perceived exertion.

Make sure to cross-check your actual TZ with your PE during the first weeks of your exercise program. After several weeks of this, you should be able to predict your exercise HR by your PE of exercise intensity.



CONTRACT (1%)

DUE – January 26

I HAVE READ AND UNDERSTAND:

1. The assignments, due dates, grading in the syllabus and...
2. That all communication, other than classroom announcements, will be via E-MAIL and no other social media.

Print Name

Signature

Date