



RPE Research Project

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Introduction to RPE Project

- American College of Sports Medicine recommends 20 minutes of vigorous aerobic activity 3 times a week or 30 minutes of moderate intensity aerobic activity 5 times a week. (ACSM, 2010)
- RPE scale
- Mode of Exercise

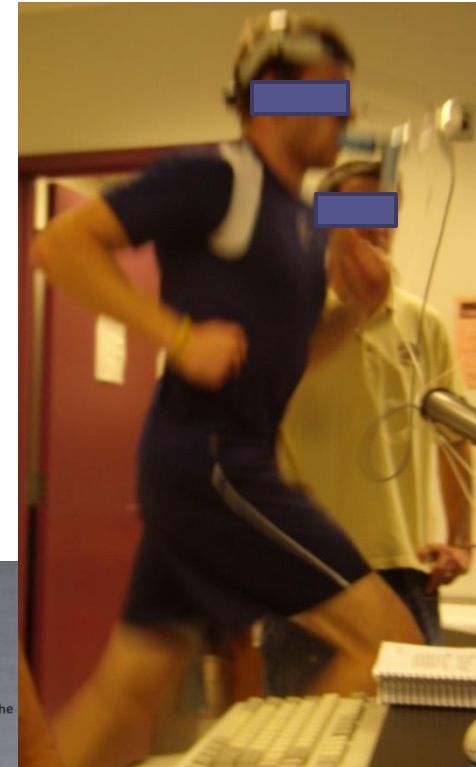
Rating of Perceived Exertion (RPE)	
6	No exertion at all
7	Extremely light
8	Very light
9	Light
10	
11	Somewhat hard
12	
13	Hard (heavy)
14	
15	Very hard
16	
17	Extremely hard
18	
19	Maximal exertion
20	

Procedures

- VO_2 max Trial
 - Determination of fitness level
 - Maximal O_2 consumption measured
 - Heart Rate and Lactate recorded

Procedures for a Graded Exercise Test

1. Make sure metabolic cart is plugged in at least 45 minutes before we use it to warm-up properly.
2. Record the environmental conditions into the metabolic cart. Make sure the units are the same.
3. Enter the environmental conditions into the computer.
4. Calibrate the metabolic equipment.
 - a. First syringe press is to test, so it does not matter how quickly it is performed.
 - b. The next three syringe presses are done as a test as well.
 - c. The next syringe press must be within 50-80.
 - d. Be within the 100's
 - e. Be within the 200's
 - f. Be within the 300's
 - g. Be within 400-500's. Note – this is the only one that cannot be changed, so press accordingly!!
5. Record the subject's height using the stadiometer. Subject must remove shoes. Record height in centimeters (ex- 157.8 cm)
6. Record subjects weight, without shoes, using the digital scale.
7. Record subject's age.
8. Enter the subject information into the computer.
9. Instruct the subject on the use of the RPE scale. A 6 would be putting forth a little effort and relaxing, and a 20 is putting forth lots of effort. Let them know you will be checking their RPE number on the scale the last 10 seconds of each stage of exercise. They will be recording their number on the clipboard. There is no right or wrong answer.



- Submaximal Trials

Cycle

Treadmill

Elliptical

Elliptical Sub-Maximal Test

Treadmill Sub-Maximal Test

Cycle Ergometer Sub-Maximal Test

Name: _____ Date: _____

Weight: _____ kg Height: _____ cm Age: _____ years Filename: _____

Pbar (mmHg): _____ RH%: _____ Temp (°C): _____

Min	RPM	Watts	HR	Lactate	Notes: changes made by subject
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					

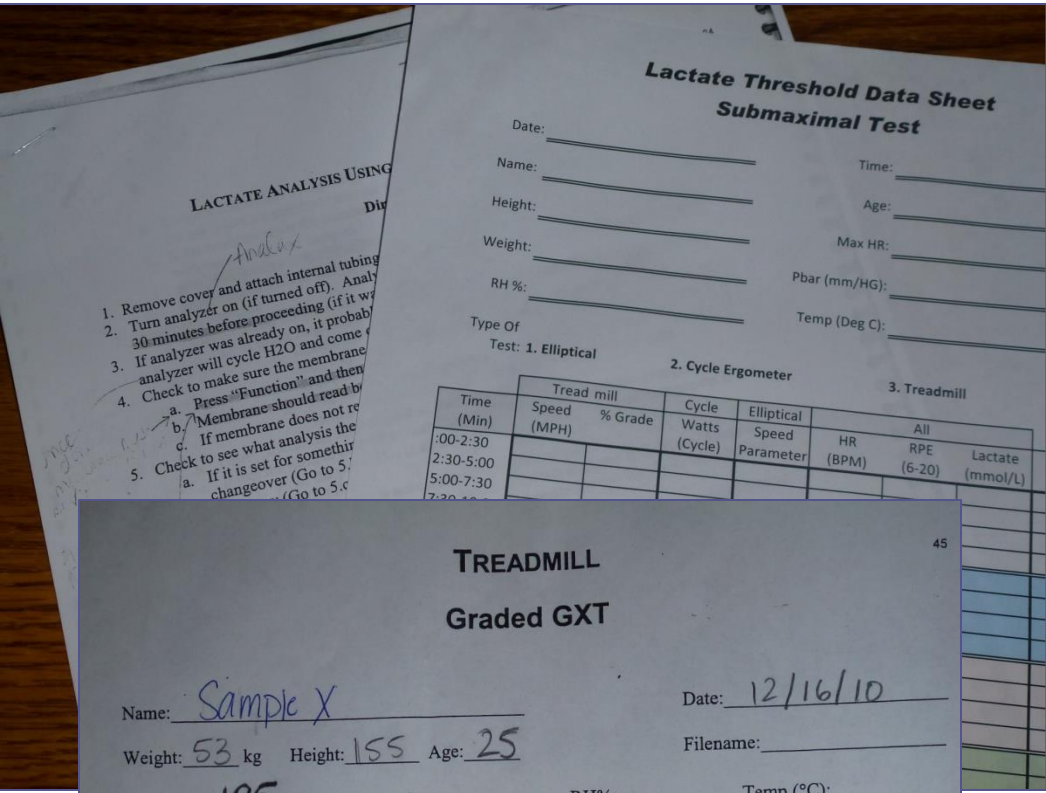
Outline

- Research Methods
- Knowledge of Equipment
- Working with Subjects & Other Researchers
- Interpretation of Data

Research Methods

- Consistency
 - Maintaining same procedures
 - Personal responsibilities
- Reliability
 - Machines
 - Proper procedures
 - Other researchers

Research Methods...



Following Protocol

- Subject's Role: no working out prior, coming prepared, medical past, etc.
- Researcher's Role: preparing machines & materials, proper calibration, lactate solution, etc.

Time	Speed	% GR	HR	RPE	Time	Speed	%GR	HR	RPE
0:00-0:30	3.0	0%	121		7:00-7:30		10	182	
0:30-1:00			114		7:30-8:00			184	17
1:00-1:30			118	7	8:00-8:30			125	
1:30-2:00	5.5	0%	118	7	8:30-9:00	15			
2:00-2:30			148		9:00-9:30				
2:30-3:00			147		9:30-10:00				
3:00-3:30			153		10:00-10:30			175	

Knowledge of Equipment

- RPE scale
- Heart rate monitor
- Mouth piece/ Headgear
- Lactate Machine



Working with...

Subjects

- Communication
- Professionalism
- Atmosphere
 - Blood Sample
 - Skinfold Assessment

Others Researchers

- Communication
- Conflict Resolution
- Teamwork
- Supportive Criticism

Interpretation of Data

	%Hrmax	%VO2max	Total Cal Expenditure
Cycle	62.1%	37.7%	260.6 kcal
Treadmill	77.3%	55.8%	381.6 kcal
Elliptical	78.0%	53%	375.6 kcal

- Why is this important?

References

- American College of Sports Medicine . (2010). *ACSM's Guidelines for Exercise Testing and Prescription* (8th Edition). Philadelphia: Lippincott, Williams & Wilkins.