

Volume 2, 2013

# The Kruel Aquatic Factor, How hard are you pushing your participants!

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New Water Heart Rate formula.

The Kruel Method is as follows:  $220 - \text{age} - \text{resting heart rate} = \text{heart rate max} \times \% \text{ want to work at} + \text{resting heart rate} = \text{target heart rate} - \text{aquatic factor} = \text{aquatic target heart rate}$

The aquatic factor will take in to consideration the effect of immersion in water on the body's circulation system. It is figured by having your participants stand on the deck for 3 minutes before taking their heart rate, then standing in armpit depth for 3 minutes before taking their heart rate again. Subtract the water based heart rate from the land based heart rate and you will have the aquatic factor. The aquatic factor will vary from individual to individual just as the resting heart rate does.

Two other methods that we use to monitor intensity of the workout is Perceived Exertion and the Talk Test. Below are physical indications to help participants to know how hard they are working.

Light exercise intensity

No noticeable change in breathing pattern

Don't break a sweat unless the environment is very hot or humid.

Can easily carry on a conversation or sing

Moderate exercise intensity

Breathing quickens but you are not out of breath or panting

Develop a light sweat after approximately 10 min.

Can carry on a conversation but not sing

Vigorous exercise intensity

Breathing is deep and fast

Develop a sweat after a few minutes

Can say only 2 or 3 words without pausing for breath

The above information from AEA's A K W A April /May 2013 volume.

Mail this test with \$5 (Members may use their vouchers) to  
A-PAI, 547 WCR 18. Longmont, CO 80504

A passing score of 80% is required and a CEC certificate will be mailed back to you  
to count toward renewal.

Name \_\_\_\_\_

Address \_\_\_\_\_

Phone \_\_\_\_\_ E-Mail \_\_\_\_\_

Either send check or money order to A-PAI

Or Circle one: Visa, Mater Card, Discover, or American Express

Name as it appears on credit card \_\_\_\_\_

Credit Card Number \_\_\_\_\_ Expiration Date \_\_\_\_\_

Billing Statement Zip Code \_\_\_\_\_ Security Code \_\_\_\_\_

Billing Statement Address \_\_\_\_\_

\$5 for 1 CEC .

For the following cases identify the intensity, (Light Moderate or Heavy)

1. Intense conversation between 2 participants during your class.
2. Participant in the back has developed a bit of facial color and sweat beads on the brow.
3. Intermittent conversation between 2 participants.
4. Someone in your class loves to sing to every song?
5. Occasionally they respond to your bad jokes during class?

If your standing deck heart rate is 100 and your standing in arm pit deep water is 85, what  
is thee aquatic factor?

Using the aquatic factor above, if your desired heart rate range is 135-150 bpm on land,  
what is it in the water?