

The Fitness Journal

a newsletter for personal trainers and aquatic instructors

Greetings from Colorado — Aquatic Fitness Comes to the Rockies

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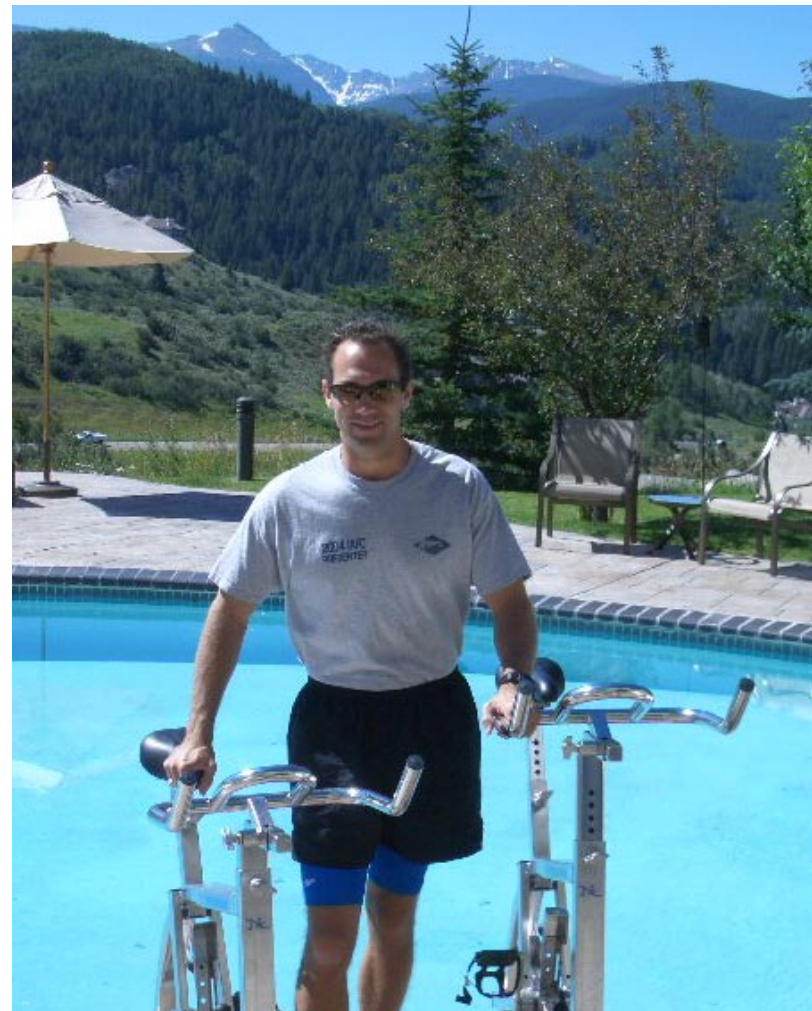
Next time ...

Online person
training: Is it
effective? Can it be
profitable?

Long-time readers of this newsletter might have wondered if we had fallen off the face of the earth. Well, not quite. After a few months, we have finally gotten settled in our new home in Eagle, Colorado, outside of Vail. It took a while to get re-established and build a client base, but we're finally firing on all cylinders again. It is great to be back.

IAFC '05 was a wonderful conference as always. The presenters were amazing and the information was invaluable. Again, if you did not get a chance to, please plan on attending next year.

We are working cooperatively with another company to add some palates to our programs that we offer. This is an exciting opportunity that we are very proud to be



a part of. In addition to the Palates, look for more changes in the future.

We are already beginning to make a splash here in the Vail Valley. With the purchase of five

Coronary Heart Disease in the US

Questions and Answers for Your Students

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HydroRider Bikes, we are the only company in the valley with the bikes, and hope to be the premiere provider of aquatic fitness and training. We are definitely excited to have this opportunity.

We are also teaming up with aquatic physical therapists in Colorado to create an aquatic alliance through networking. This will certainly boost the popularity of



aquatic training here in Colorado.

We are also in the process of negotiating with one of the premiere mountain resorts in Colorado to allow us to bring different workshops to the valley. This will be a huge asset for us and the valley. What better place to do a workshop than at about 9000 feet with 50-100 mile views.

We want to remind everyone that there are still some open dates for the fall for workshops. Please let us know if you are interested in hosting any events.

As always, keep up the great work this summer and let's keep the momentum going. ♪

Judith Powers, MS
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Take a closer look at the participants in your next aqua class. Notice any older faces? Good!!! It is not a coincidence. They want to take part in the many benefits of aquatic exercise. Physicians have referred these students to the pool, rehabilitation therapists and the positive impute of their peers,

because it is a safe and less physically stressful exercise medium. Statistical data on growth of our populations have estimated that by the year 2030, there will be over 70 million individuals age 65 and over in the U.S. alone. They also estimate that the 85 and over population segment will be the fastest growing component.

Where will you be in 2030? How well are you prepared to deal with this new aging client? As Aquatic Instructors we must have awareness and understanding of the medical profiles of this group of class participants.

This article will attempt to answer some of your or your student's questions surrounding the risks and incidence of Coronary Heart Disease (CHD), Stroke and Hypertension in the US. What we can do to help our students with education and support. What are the goals and benefits of Cardiac Rehabilitation programs?

What are the risks of CHD?

American College of Sport Medicine (ACSM) recommends that sub-max exercise testing, in conduction with appropriate screening; is appropriate for your clients with low risk. This can be used to educate the student/client about their health and motivate the sedentary adult to exercise. Not all of us have the skill or time to perform sub-max testing on our students, nor



would it be appropriate in the group exercise setting. AEA has developed a program for Personal Trainers that discusses these more specific points for one-on-one training.

ACSM stated it is desirable to stratify individuals considered for exercise testing or to plan an exercise program. Your clients/students can be classified into three risk strata for triage as follows:

ACSM Risk Stratification

1. Low Risk	Individual who are asymptomatic and apparently healthy (no more than one major coronary risk factor)
2. Moderate Risk	Individuals with signs or symptoms of cardiopulmonary or metabolic disease (two or more major coronary risk factors)
3. High Risk	Individuals with known cardiac, pulmonary, or metabolic disease

Who has Coronary Heart Disease (CHD)?

The American Heart Association (AHA) reported this information in the 2002 Heart & Stroke Coronary Statistical Update. In 1999, U.S. statistics reported the main cause of death for 529,659 people was Coronary Heart Disease (CHD). This accounted for 1 in every 5 deaths. CHD is the single largest killer of Americans. Every 29 seconds someone will suffer a coronary event and about every minute someone will die.

How does the statistics for women compare to men as far as Heart Attacks?

12,600,000 people today have a history of a Myocardial Infarction (written MI in literature but often called "heart attack") or angina pectoris (chest pain) or both. About 6,200,000 are males and 6,400,000 females. From the years of 1989 to 1999 the death rate from CHD dropped by 24 percent; the actual number of deaths decreased by only 6.8 percent.

CHD kills more women than all forms of cancer, pneumonia, diabetes, accidents and AIDS combined. African American women are at a 38% higher rate from heart attack than white women. Most women between the ages of 25 – 44 think they aren't at risk. But this insidious disease process that leads to heart attack and stroke starts when we are young and progresses over time.

The average age for the first MI event is age of 70 for women and 65.8 years for men. Approximately, 63 percent of the all women die suddenly from CHD with no previous symptoms, but only 50 percent of all men die of similar conditions.

This would lead researchers to believe that the female population is as much at risk for CHD as males are but at a later age. This is especially true for those women who don't have as many tell tale signs of CHD before the MI event.

Coronary Artery Disease Risk Factor Thresholds for Use with ACSM Risk Stratification

Positive Risk Factors	Defining Criteria
Family history	MI or sudden death before 55 years (male) 65 years (female) of age in first-degree blood relative
Cigarette smoking	Current cigarette smoker or those who quit within the previous 6 months
Hypertension	Systolic blood pressure of > 140 mm Hg or diastolic blood pressure of > 90 mm Hg, confirmed by measurements on at least two separate occasions, or on antihypertensive medication
Hypercholesterolemia	Total serum cholesterol > 200 mg/dL or HDL < 35 mg/dL
Impaired fasting glucose	Fasting blood glucose of > 110 mg/dL confirmed by measurements on at least two separate occasions
Obesity	Body Mass Index of > 30 kg/m ² , or waist girth of > 100 cm
Sedentary lifestyle	Persons not participating in a regular exercise program or meeting the minimal physical activity recommendations from the U.S. Surgeon General's report
Negative Risk Factors	Defining Criteria
High serum HDL cholesterol	>60 mg/dL

ACSM's Guidelines for Exercise Testing and Prescription Lippencott, Williams and Wilkins Publishers, (Sixth Edition) 2000.

Who has a Stroke?

A Stroke is a neurologic condition that is closely related to cardiovascular disease. The stroke refers to an injury to the brain caused by an inadequate blood supply when there is blockage in the artery to the brain. Transient ischemic attacks (TIAs) resemble a stroke but are temporary episodes of interrupted blood flow. TIAs are regarded as a serious warning sign for stroke.

In 1999, stroke was the cause of death for 167,366 Americans. This accounts for about one in every fourteen deaths. Stroke ranks third as the leading cause of death in the U.S. just behind CHD and Cancer.

There are about 4.6 million stroke survivors in the U.S. today. They were divided equally, 50% male/female population. In 1999, the overall death rate for stroke was about 62 % reports The Center for Disease Center (CDC).

Risk of Death from Stroke

African Americans	Whites	Asian/Pacific Islanders	Hispanics	American Indians
84%	59%	52%	40%	38%

Who has High Blood Pressure?

Fifty million Americans ages six and older have High Blood Pressure (HBP) greater than > 140 mm Hg (systolic) over > 90 mm Hg (diastolic) or higher states the CDC and NCHS. One in 5 Americans or 1 in 4 Adult Americans have High Blood Pressure.



HBP is two to three times more common for women taking oral contraceptives than those who don't. This is especially

true for the obese and older women.

The prevalence of hypertension among African Americans is the highest in the world. 30% of all deaths in hypertensive black males and 20% in black females may be caused by HBP. This death rate for stroke is highest among all races living in the Southeastern United States.

Median Percent Who Have Been Told They Have HBP In The United States By Race

African Americans	Whites	Asian/Pacific Islanders	Hispanics	American Indians
31%	23%	21%	19%	16%



What does "Open Heart Surgery" mean?

Coronary Artery Bypass Grafting is often referred to as CABG. This procedure creates a detour for the blood to go around the blockage within the arteries of the heart. This type of operation was first performed in 1969. Today this procedure is performed over 300,000 times every year in the United States.

Typically one goes through a Cardiac Rehabilitation program that has four phases designed to return the patient to their normal daily activities post MI or CABG. You as a fitness instructor wouldn't work with these patients until after they have completed their medical treatment program and have been released from the physicians care.

What is Cardiac Rehabilitation?

The goal of Cardiac Rehabilitation (often called cardiac rehab) is to enable the client with CHD to increase their physical capacity to within the limitations of

Tai Chi and Cobblestone Mats: Two Exercises to Help Elderly Regain Balance

Two recent studies show that exercises long popular in China, tai chi and walking on cobblestones, hold promise for helping the elderly improve balance and perhaps avoid dangerous falls.

In the tai chi study, published in the July issue of *The Journal of Advanced Nursing*, 59 men and women with an average age of 78 were divided into two groups, one participating in a 12-week tai chi course, the other maintaining its usual activities without exercise class.

Measures of muscle strength showed that the physical fitness of the exercise group improved significantly. Balance, as calculated by how long a person could stand on one foot with her eyes open, also improved by the end of the program.

Thirty-one percent of the people in the tai chi exercise group experienced falls during the period, compared to 50 percent of the non-exercisers, although the difference was not statistically significant.

In the other study, published online, two groups of 54 healthy men and women of age 60 or older participated. Each group walked three times a week for 30 minutes in a program lasting 16 weeks. One group walked on a flat surface while the other walked on mats that replicated the uneven pattern of cobblestones that are common in Chinese parks. The intensity of the exercise was carefully tracked to make sure the members of both groups were using the same amount of energy. While participants in both groups improved on several measures of physical health, the mat walkers had better balance, lower blood pressure, and faster times in walking 50 feet at the end of the exercise program. They also did better in a test of how fast they could rise from a chair, walk 10 feet, and then sit down. ¶



Reported by Nicholas Bakalar in the *New York Times*.

their diseased state. The objectives for an outpatient Cardiac Rehabilitation program according to Kyle McGinnis, PhD Professor at University of Massachusetts are as follows:

- To reduce the risk of cardiovascular mortality and reinfarction (another MI)
- To alleviate or lessen activity related symptoms of CHD
- To limit the progression of the disease, or to reverse the atherosclerotic plaque build up in the coronary arteries causing blockage

Who should exercise outside of Cardiac Rehab and physician supervision?

You may see at your pool program patients with diagnosed disease (CAD), Post Myocardial Infarction (MI), CABG, angina pectoris, where their condition is stable are the types of students. Those who have these characteristics or reached this point with their exercise capacity:

1. Exercise Capacity of 5-6 MET
2. No evidence of heart failure
3. Free of ischemia (lack of oxygen flow) or angina

- (chest pain) at rest or below 6 MET
4. Appropriate rise in Systolic Blood Pressure during exercise
5. No sequential premature ventricular contractions (PVC)
6. Ability to self-monitor exercise intensity

Those who shouldn't workout with you have these conditions:

Too High Risk: Warning!! Warning!! Alert!! Alert!!

- .. Unstable Angina
- .. Anginal Symptoms at rest or during light physical activities
- .. Limited Exercise Tolerance (i.e. < 5 MET)
- .. Abnormal Heart Rhythms
- .. Heart Failure

What programs are out there to help our students with CHD?

Cardiac Rehabilitation programs are available at many hospitals and health facilities. In a past

AKWA article, I referred to the likelihood of many of your students coming to aqua exercise classes after completing their cardiac rehab program. Being aware of the benefits and goals of cardiac rehab will help you to better understand where your student may be coming from.



What are the benefits of Cardiac Rehabilitation?

Cardiac rehab is very beneficial but under used, reports the Agency for Health Care Policy and Research in Washington, D.C. "Less than a third of heart patients participate in cardiac rehabilitation programs even though potentially all of them could benefit from the services," states Douglas Kamerow, M.D. key author of this report. The guidelines set forth by the Agency for Health Care on Cardiac Rehabilitation recommended a comprehensive approach that includes:

- Exercise training to improve exercise tolerance and stamina
- Education, counseling and behavioral interventions toward optimal health
- Consideration for home or fitness based cardiac rehab: for moderate to low risk patients with the guidance of their physicians

Physicians recommend that cardiac rehab as a part of their discharge plans. They found that the component parts done by the patients as individual activities have not been effective for generating benefits

to the patient's health. The research has found group based activities to be more successful.

The benefits of a well-designed cardiac rehab program includes:

- Increased Exercise Tolerance
- Improved Symptoms
- Improved Blood Fat Levels
- Decreased Smoking
- Improved Psychosocial Well-Being and Stress Reduction
- Reduced Mortality Rate

In conclusion, how can we help our students lessen their risk for coronary heart disease?

- Offer education through awareness: shared stories, health tips, simple handouts
- Encouragement for healthy lifestyle changes by making the group activity fun, social and rewarding
- Suggest to club managers or owners to host a health fair, thereby providing education for the high-risk members on prevention. You could bring in the medical group and health promotion specialists to help with the blood pressure or cholesterol screenings. ♣

Judi Powers, M. S.

Judi is one of the Co-authors and presenters for the Aquatic After Care Training program. Judi is American College of Sports Medicine (ACSM) Health Fitness/Instructor certified. She is a Training Specialist for Aquatic Exercise Association (AEA) for 10 years. She currently sits on the Advisory Board and writes for AKWA.

She has been an associate professor at Mount Ida College, past Director of Educational Services coordinating the AFAA Personal Training and Weight Training Certifications, and teaching associate for Fitness Resource Associates, Inc. of Boston, Massachusetts and a Personal Training Certification Specialist for AFAA for over 10 years.

Judi now lives, teaches pilates/Yoga and personal trains in Midland, Michigan where she offers continuing educational courses. She can be reached at: Judipowers@charter.net.

Choreography: Change Keeps It Fresh and Fun



I want to take this time to talk a little about the importance of changing your choreography on a regular basis for your participants. I have always known how important it was from a physiological point of view, but the importance of the enjoyment that it brings to participants hit me once again last week.

After my class last Thursday, one of the women that has made every class was talking to a new participant about the variety of formats for the classes and that none of the classes have been the same. She started talking about the various formats we have used. This in itself made me happy, just to know that I have been able to educate the participants on the various types of classes we can teach.

She named about six different formats off the top of her head and then looked at me for help. I assisted her by reminding her that this was only the 6th class. This made a huge impression on the new participant. I know what you are thinking: "How big of an impression could it have made?" Well, she showed up at a different facility today to take a class from me that I was subbing for. More surprising, she is just visiting here for a week or so. That is why I wanted to start the article with this story. There are few things more flattering to an instructor than have a student so enjoy a class that they help recruit others.

In addition, I was also able to schedule five personal training sessions with two other guests that were visiting this week. This is pretty good from

a class of 4 participants at a resort where no one has shown up at the last several classes and the class is being cancelled after today and no regulars showed up. If you remember several weeks ago, we touched on how powerful a tool subbing classes can be. Today was the classic example.

As instructors, we are only limited by our own imagination. I have said this time and time again, but it is so true. We need to tap our creative urges and put some time in our classes. After all, our participants are making a conscious effort to come to our class. This means we need to create a sense

of excitement and intrigue for our participants. This does not mean we need to stray from the purpose of that class. It just means that we are putting thought into the format of the class and keeping the participants interested. The participants will now show up to see what is next. Hopefully, this is not the only reason, but if it is, at least they are showing up. Our job is to get them to show up for a safe and effective workout.

During the last three weeks, I have done a variety of formats. Here is a condensed list of those formats or class objectives.

1. Cardio workout
2. Core training
3. Intervals
4. Strength training
5. Circuit Training
6. General conditioning and toning

Changing formats this quickly can put a lot of pressure on an instructor if they are not used to teaching a variety of formats or do not have a plan for altering their workouts. This is why we need to always have backup plans and alternative ideas. These alternative plans can easily turn into alternate workouts for our participants. This will in turn create a sense of variety for the participants. ¶

I'm Not Going to the Gym. It's Too Hot Outside!

People who do not exercise enough may have a new excuse: the weather. A new study finds that people in cool, dry climates spend more time exercising than those who live where it is hot and humid.

A recent study conducted by the Centers for Disease Control and Prevention correlated exercise with reports from 255 weather stations in the US and Puerto Rico to figure out what percentage of people in each region met the CDC recommendations for exercise.

Montana, Utah, Wisconsin, New Hampshire, and Vermont topped the list of states whose residents exercised the most, while people in Hawaii, Puerto Rico, North Carolina, Kentucky, and Mississippi exercise the least. Counties in the top 25 percent in meeting the CDC recommendations had the highest percentage of days with dry moderate conditions, while those in the bottom 25 percent has the highest percentage of days with moist tropical conditions. Regional differences were substantial. The study showed that almost regardless of the availability of modern indoor facilities, climate still explains a great deal of the variation in physical activity. ¶

Coming Events

September 10-11 , 2005
E. Jefferson General Hospital
& Wellness Center
Mettarie, LA

October 1-2 , 2005
The Claremont Club
(outdoor pool)
Claremont, CA

Sponsors and Suppliers



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