



APFRI  
Publication  
No.13

# What's New from APFRI

Inside this edition: COL Thomas Williams Retires,  
National Men's Health Week, 3 Common Fitness Myths,  
Sleep Your Way to Better Health, Recipes, Word Search and  
More...



June/July  
2010

## APFRI Director Retires From the Military



After eight years at the helm of APFRI and thirty years of service to the United States Army, COL Thomas J. Williams' retirement ceremony will be held in Bliss Hall, at the US Army War College on Friday, June 25 at 1530.

COL Williams has had a tremendous positive impact on the health and fitness of the U.S. Army through leadership of APFRI. Thousands of U.S. Army War College students have been impacted by his work, not only gaining greater awareness of leadership style, cardiovascular disease risk and the psychological influence in the military, but also refining leadership style and improving health and well-being. COL Williams was ultimately responsible for the safe and effective assessment and education of over 7,000 research participants, an increase of more than 12 times the enrollment prior to his tenure as APFRI Director. In addition, he provided the direction and leadership for over 3,000 health promotion assessments for students spouses, faculty and other members of the military family not eligible to participate in the research protocol.

Following the charge from then USAWC Commandant, MG David Huntoon, to share the goodness that is APFRI, COL Williams led the expansion of the APFRI program to more of the Army leadership. In 2007, General George Casey, Chief of Staff of the Army, directed the U.S. Army War College to expand the mission of APFRI with the development of APFRI Annexes as part of a comprehensive Education and Wellness program linked with Professional Military Education to enhance leader readiness and sustainment. COL Williams led the talented members of the APFRI program to respond to General Casey's directive while fully comprehending the individual leaders' need to manage their personal readiness with a goal to enhance their ability to influence the complex interaction of leadership, health and fitness for those they lead and sustain readiness in the face of operational fatigue. No other Army program at that time assessed the operational fatigue, health, and fitness status of mid-career and senior leaders attending the U.S. Army War College, Command and General Staff College (CGSC), U.S. Army Sergeants Major Academy (USASMA) or other levels of PME. COL Williams directed the establishment of annexes at CGSC at Fort Leavenworth, Kansas and the USASMA at Fort Bliss, Texas. More recent expansion includes providing services to both the Marine Corps War College and Air War College. As a result of his leadership at APFRI, COL Williams received an IMPACT Legion of Merit, an award given only seven times in the history of TRADOC.

COL Williams' leadership and dedication to excellence has led the APFRI program to be one of the most highly rated programs at the U.S. Army War College and has already been credited by participants as saving lives of mid-career and senior leaders. A testament to the success of the program, approximately 98% percent of the U.S Army War College resident students volunteer for APFRI's health assessments each year. In 2006, COL Williams also developed the Leadership Feedback Program, a state-of-the-art 360 degree strategic leader behavior, personality, and team roles assessment and feedback program focused on Army War College student self-awareness. The LFP was recently expanded to both the Marine Corps and Air War Colleges.

COL Williams' previous assignments have included: medical platoon leader of the 548th Engineer Bn (CBT HVY), 20th Engineer Brigade, XVIII ABN Corps, Fort Bragg, North Carolina; Aide-de-Camp to the Commandant, Academy of Health Sciences, Fort Sam Houston, TX; Deputy Director, Policy Analysis, Office for the Assistant Secretary of Defense (Health Affairs); Assistant to the Chief, Medical Crops Affairs, Office the U.S. Army Surgeon General, The Pentagon. Following his service at The Pentagon, COL Williams completed a Ph.D. in Clinical Psychology at Saint Louis University and began his career as an Army Psychologist serving at Walter Reed Army Medical Center as both Chief, Department of Psychology and Chief, Strategic Planning Division, Walter Reed Health Care System at Walter Reed Army Medial Center. He subsequently was assigned as the Command Psychologist, 902d MI Group, Fort Meade, MD and held that position until his 2002 assignment to the U.S. Army War College. COL Williams was presented the prestigious Knowlton Award for his excellence in military intelligence, the only individual outside military intelligence to have received this recognition.

In 2002 - 2003, COL Williams deployed as the Command Psychologist with 10th Special Forces Group (ABN), Fort Carson, CO in support of Operation Iraqi Freedom, and in support of Joint Special Operations Task Force-North, Iraq. COL Williams deployed again in 2004 to provide operational support as Command Psychologist for Joint Special Operations Task Force-Arabian Peninsula and in 2008 as Command Psychologist supporting US Special Operations Command South.

COL Williams and his wife Vera have four sons Thomas, Theron, Joseph and Tyler, and daughter, Stacia.

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## Does it Matter if the HDL Cholesterol is Low when LDL is also Low?

Yes it does! A study involving more than 4,000 Veterans revealed that every 10-mg/dL decrease in HDL cholesterol corresponded to a 10% increase in hospitalization due to heart attacks. Several studies have found that people with low HDL cholesterol levels have higher risk for heart disease, even when LDL cholesterol is low. For example, those with very low LDL (less than 60 mg/dL) and the lowest HDL (28 mg/dl) were 59% more likely to have a heart attack and end up in the hospital than those who had healthy HDL cholesterol level ( $\geq 60$  mg/dl), according to a recent John Hopkins Health Alert.

HDL has the important role of removing cholesterol from the artery walls. HDL also appears to have an important anti-inflammatory and anti-oxidant effect. Science is now pointing towards a link between many of the common health problems of today and markers of inflammation in the blood. If we can boost the factors having an effect on reducing inflammation, we may both reduce the risk for heart disease as well as other diseases such as osteo-arthritis, diabetes, cancer, and even Alzheimer's disease.

It is still good to have realistic goals when trying to raise the HDL level. Family genetics and the female sex hormone estrogen will affect your potential to boost HDL, so some people, particularly men, are prone to have lower HDL levels. But don't throw in the towel just yet! Research has clearly demonstrated that the combination of nicotine free lifestyle, exercise, and weight loss will have positive effect on HDL and other markers of inflammation. For some, a moderate consumption of alcohol (one drink per day for women and two per day for men) may also be helpful to improve HDL.

Yet one additional key to reducing inflammation and boosting HDL is eating a diet rich in "anti-inflammatory" components. Numerous studies over the years have been able to demonstrate that certain foods have anti-inflammatory properties while others clearly add to the inflammation furnace.

The table to the right gives examples of food that have known anti-inflammatory components. Consuming these foods in portions normally consumed, but on a regular basis such as several times weekly, or some of them every day, can be helpful in boosting HDL. Consistently limiting or avoiding components of foods or foods that are pro-inflammatory is also likely to reduce your risk for heart disease and other inflammation related conditions.

As always, APFRI recommends tobacco cessation along with a healthy balance of exercise and nutritious food. Striving for a healthy weight through daily exercise and a diet abundant in whole grains, fruits, vegetables, lean meats, low-fat or fat-free dairy, and plant sources of protein and fats such as nuts and olives, are likely to pay off long term.

<b><i>Anti-Inflammatory Foods</i></b>	
<b>Legumes</b>	Beans and tofu
<b>Fish</b>	Cod, halibut, herring, oysters, salmon, and tuna
<b>Fruits</b>	Apples, berries, cherries, citrus fruits, pineapple, and tomatoes
<b>Vegetables</b>	Bell peppers, broccoli, cabbage, garlic, greens, onions, and sweet potatoes
<b>Herbs and spices</b>	Basil, cinnamon, turmeric, ginger, mint, oregano, and thyme
<b>Nuts</b>	Almonds, hazelnuts, walnuts, and pistachios
<b>Oils</b>	Canola and extra virgin olive oil
<b>Snacks</b>	Dark chocolate (but limit the portion size to 1.5 oz per day)
<b>Beverages</b>	Green tea and red wine
<b><i>Pro-Inflammatory Foods</i></b>	
<b>Processed meats</b>	Hot dogs, luncheon meats, sausage
<b>Highly processed carbohydrates</b>	Doughnuts and potato chips
<b>Refined sugars</b>	Candies, pastries, and sugar-sweetened beverages
<b>Oils</b>	Hydrogenated and partially hydrogenated oil
<b>Trans fatty acids</b>	Margarine and shortening
<b>Saturated fats</b>	Butter, lard, cream, cheese, palm kernel

# Grilled Chicken with Spicy Fruit Salsa

## Chicken:

- 4 boneless, skinless chicken breast halves (about 4 ounces uncooked each)
- 2 teaspoons salt-free steak seasoning blend
- 1/8 teaspoon salt
- 1 medium lemon

## Salsa:

- 1 teaspoon canola, olive, or corn oil
- 2 slices fresh pineapple, each 1/2 inch thick, patted dry
- 1 cup diced mango or strawberries
- 1/4 cup finely chopped red onion
- 1-2 teaspoons sugar
- 1/8 teaspoon crushed red pepper flakes
- 1 tablespoon bottled tomato salsa (optional)
- 1 teaspoon lemon zest



## Directions:

Preheat grill on medium high. Brush a grill pan or rack with the oil. Heat the pan or rack for 2 minutes or until hot. Grill the pineapple for 2 minutes on each side. Transfer to cutting board and dice. In a medium bowl, stir together the salsa ingredients and set aside. Sprinkle both sides of the chicken with the seasoning blend and salt. Grill for 5 minutes on each side, or until no longer pink in the center. Transfer to plate. Squeeze lemon over the chicken. Serve with the salsa.

### Nutrition Information Per Serving:

Calories	191	Cholesterol	66mg
Total Fat	3.0 gm	Sodium	151mg
Saturated Fat	.5 gm	Carbohydrate	14 gm
Trans Fat	0 gm	Protein	27gm
Polyunsaturated Fat	.5 gm		
Monounsaturated Fat	1.0 gm		

# Marinated Vegetable Toss



- 1 14-ounce can quartered artichoke hearts, rinsed, well-drained
- 1/4 medium red bell pepper, thinly sliced
- 1/4 cup thinly sliced red onion
- 1 1/2 cups packed fresh baby spinach leaves
- 9 small black olives, halved (reduced sodium)
- 2 teaspoons cider vinegar
- 1 1/2 teaspoons sugar
- 1 teaspoon olive oil
- 1 medium garlic clove, minced

## Directions:

Stir together all ingredients. Let stand for 10 minutes. For best flavor, serve immediately after the stand time. Makes six 1/2 cup servings.

### Nutrition Information Per Serving:

Calories	44	Cholesterol	0 mg
Total Fat	1.8 g	Sodium	163 mg
Saturated Fat	0 g	Carbohydrate	6 g
Trans Fat	0 g	Protein	2 g
Polyunsaturated Fat	0 g		
Monounsaturated Fat	1.0 g		

## Prostate cancer: To screen or not to screen



There are conflicting opinions as to whether or not to screen for prostate cancer. According to the National Cancer Institute Surveillance Data (2006), prostate cancer is the most common form of cancer in men. On a daily basis, 640 men are diagnosed with prostate cancer. Yearly, 203,415 men are diagnosed and 28,372 men die from prostate cancer. The lifetime risk of dying from prostate cancer is one in 30. Almost 12 million men have prostate cancer cells present in their system (Chodak, 2006). Prostate screening increases an individual's chance to find a cancer that is potentially curable and offers peace of mind. However, a one-time prostate test does not provide enough information to make a good health care decision. Prostate screening must be monitored over time and discussed with the health care provider.

The prostate gland is an important organ in men. "As part of the male reproductive system, the prostate gland's primary function is to secrete a slightly alkaline fluid that forms part of the seminal fluid, a fluid that carries sperm. During male climax (orgasm), the muscular glands of the prostate help to propel the prostate fluid, in addition to sperm that was produced in the testicles, into the urethra" (The Ohio State University Medical Center, n.d). The prostate produces a specific protein or biological marker called the prostate specific antigen (PSA). This biological marker is tracked over time with PSA blood tests.

A PSA blood test measures the protein level and quantifies the amount of protein produced by the prostate gland (National Cancer Institute, n.d.). When the level of a biological marker is high, there is a greater concern that cancer cells are present in the prostate gland. The PSA biological marker level increases more rapidly in men with prostate cancer. A normal PSA is less than 2 ng/mL for men between the ages of 50-70 years. As long as the PSA results in less than 2 ng/mL, screening once every two years is reasonable. However, annual screening is recommended if the PSA is over 2 ng/mL. If the PSA is above 2 ng/mL, monitor the velocity (its rate of change over time) over a one to two year period. The change in velocity appears to occur 10-15 years prior to a prostate cancer diagnosis (Carter et al., 2006). According to experts at the Johns Hopkins Institute, an early predictor of prostate cancer for men is a PSA velocity change of 0.35 ng/mL a year for a PSA between 2-4 ng/mL and 0.75 ng/mL for a PSA above 4 ng/mL. However, prostate cancer can still occur even when an individual has a normal PSA. There is no safe number that guarantees an individual will or will not develop prostate cancer. Regular follow-up with a health care provider is imperative to ensure that an individual completes a comprehensive exam in addition to a PSA test.

Your decision whether or not to screen also needs to include an assessment of several risk factors.

### Prostate Screening Risk Factors

**Family history:** The risk is greater if you have a first-degree relative (father, son, or brother) diagnosed with prostate cancer younger than age 65 years.

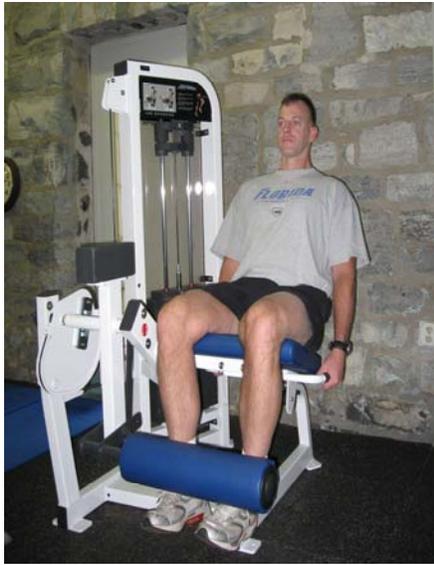
**Age:** Begin screening by age 45 years. However, if an individual has several first degree relatives with prostate cancer, screening should begin by age 40 years.

**Race:** African Americans have a higher rate of prostate cancer as compared to other ethnicities.

**Presence of warning signs:** Difficulty or pain with urination; frequent urination, especially at night; blood in the urine; and, pain in the low back, pelvis, or upper thighs.

APFRI believes screening for, and identifying, cancer at an early stage improves the chances for a cure. Prostate screening is a personal choice that needs to be discussed with your health care provider.

## APFRI Addresses Three Common Fitness Myths



People who often exercise follow recommendations from websites or magazines which may not always be factual. Numerous research studies have been investigated to provide valuable information about which exercise training techniques work and which ones do not. The following three common fitness myths will be addressed to set the record straight.

### **Myth #1: Endurance athletes shouldn't perform strength training.**

Endurance athletes tend to shy away from strength training programs for fear of increasing muscle mass which can slow them down. The nature of endurance sports involves repeated, low to moderate force, muscular contractions over a long distance and/or time. These endurance sports cause a fatiguing effect on an athlete's body which can lead to a deterioration of their body posture or form as the event progresses. To help avoid this deterioration, endurance athletes need to have a sound foundation of strength.

Incorporating a strength training program into an existing endurance-based training plan can improve aerobic endurance performance by improving work economy (Hoff, Gran and Helgerud, 2002). An improved work economy results in a decreased energy cost at sub-maximal efforts which enables an athlete to move faster over a specified distance. An appropriate strength training program should be sport specific and varied over time to enable an athlete to systematically change their training to maximize performance while minimizing the chances of overtraining.

Many endurance athletes, who currently perform strength training, commonly use low sets, high repetitions, and a low intensity (weight) approach. However, results from a recent study published in the International Journal of Sports Medicine suggest that low volume-high intensity strength training can improve running economy (Guglielmo, Greco and Denadai 2009). Based on current research, it is recommended that endurance athletes consistently engage in a wide range of strength training that includes variable intensity and is specific to their sport or activity.

### **Myth #2: Large amounts of protein are needed to build muscle.**

If you pick up a fitness magazine that is geared toward men, you will see numerous advertisements for protein supplements as well as recommendations for how much protein intake is needed to increase muscle mass. Individuals who strength train, with a goal of increasing muscle mass, may need to consume an increased amount of protein, but not the large amounts that you may see listed in a magazine, on the internet, or on the back of a protein supplement container. The current Recommended Daily Allowance (RDA) of protein for a healthy active person is 0.8 g/kg of body weight (Otten, Hellwig and Myers, 2006).

Athletes performing a consistent strength training program may need additional protein to supply the extra energy and amino acids that are necessary for muscle synthesis. This is particularly true for individuals just beginning a strength training program, since the most significant increase of muscle size occurs during the early stages of strength training. The recommended protein intake for strength trained athletes range from 1.2 to 1.7 g/kg of bodyweight per day (Phillips, Moore and Tang, 2007).

Studies have suggested that endurance trained athletes can also benefit from a protein intake above the RDA. Additional protein may have a beneficial effect on recovery from high intensity endurance training (Burke and Deakin, 2006). A protein intake ranging from 1.2-1.4 g/kg of bodyweight per day may be necessary for endurance athletes to maintain a proper nitrogen balance (Phillips, Moore and Tang, 2007).

The bottom line is that most individuals will receive an adequate intake of protein from a well-balanced diet. However, individuals who regularly engage in a vigorous strength or endurance training program may need to take in protein amounts above the RDA. (Continued...Page 9)

# USAWC Fitness Classes - Thorpe Hall

## Back to Basic

June 22 0630—0730

## Strength Training

June 25 0630—0730

## Flexibility

June 29 0630—0730

## Teen/Parent Strength

July 8 1600—1700



## Thorpe Hall Class Location

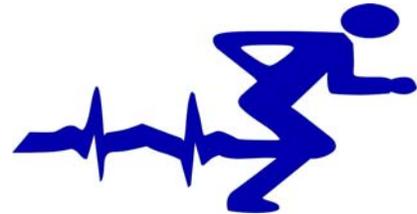
Back to Basic  
Strength Training  
Flexibility  
3rd floor.

Teen/Parent  
Strength Training  
2nd Floor.

USAWC APFRI Health and Fitness Specialists maintain office hours on the second floor of Thorpe Hall Gymnasium when mission related physical fitness assessments are not in session.

### **For More Information:**

Army Physical Fitness Research Institute  
U.S. Army War College  
Tel: (717) 245-4511  
Fax: (717) 245-4558



## *Sleep Your Way To Better Health*

Although sleep is a critical mechanism of daily living and healthy functioning, its importance is all too often overlooked by high-achieving, senior military leaders. The pressure of accomplishing an ever-increasing number of tasks often outweighs the natural desire for the rest your body needs to repair itself, consolidate memories and reinvigorate neural pathways that are essential to leadership and decision-making processes. In a recent literature review conducted at the University of Chicago School of Medicine, researchers suggest that sleep restriction slows metabolism and changes the release rate of certain hormones, leading to decreased insulin sensitivity and larger concentrations of cortisol (a stress hormone that has been linked to increased abdominal fat) during the evening hours (Leproult and Coulter, 2010). The researchers also suggest increased hunger and appetite among those who have chronic sleep restriction. These findings are supported by a previous review (Patel and Hu, 2008), that suggested that short sleep duration was associated with increased weight in children and younger adults.



The researchers propose a model in which sleep deprivation alters body temperature and increases hunger, opportunity to eat, and fatigue, resulting in increased caloric intake and reduced energy expenditure, which ultimately leads to weight gain. Both research teams propose that increasing your rest periods will restore balance to endocrine function, body temperature, appetite, and physical activity, thus helping you improve body composition, function and health. The bottom line is that, if you are chronically sleep deprived, you can actually sleep your way to better health!

## **CGSC Annex Bids Farewell to Mr. William North**



**Mr. William North**  
**APFRI Health Fitness**  
**Instructor**

**We will miss you!**



CGSC WEB SITE <http://usacac.army.mil/cac2/cgsc/Events/APFRI/>

**Become a fan on Facebook and check out updates on classes and APFRI events**

Will comes to APFRI as a spouse of an active duty ILE student. He has over 15 years experience as an exercise physiologist working in a variety of health promotion, human performance and rehabilitation settings. He has a dual master's degree in Exercise Physiology and Fitness Management from the United States Sports Academy in Daphne, Alabama. His bachelor's degree is in Sports Medicine from Phillips University. He has been certified as an American College of Sports Medicine Health Fitness Instructor since 1996. He is a Certified Strength and Conditioning Specialist from the National Strength and Conditioning Association. He is also a certified Wellness Coach from Wellcoaches USA.

Will was a competitive swimmer, cyclist and triathlete in high school and college. He has competed in 7 US National Championships for the sport of Triathlon and has been named an All-American twice. September 6, 1993, he set 3 Ultra-marathon Cycling Association national records, of which one still stands 17 years later. He rode the 236 miles from Texas to Kansas on Oklahoma State highway 81 in 10 hours and 51 minutes. Will and his family are PCS'ing to Washington DC in June 2010. He is studying for the Registered Clinical Exercise Specialist Certification with the American College of Sports Medicine.

## **USASMA Annex Bids Farewell to LTC Tracy Smith**

LTC Tracy A. Smith served as the Deputy Director, United States Army Sergeants Major Academy (USASMA) Army Physical Fitness Research Institute (APFRI) Annex for the past 24 Months. Under her leadership, the APFRI resident and non-resident program transformed from a health promotion model to research protocol. Over 900 students participated in the executive health assessment program and for the first time at USASMA, assessments were offered to spouses, staff, and faculty members. LTC Smith contributed to educating senior leaders on the importance of health and fitness and its role in meeting today's strategic goals. During her tenure, LTC Smith made a heavy impact on filling staff positions which allowed the APFRI Annex at USASMA to be fully operational. She spearheaded a \$120K renovation plan to support the expansions which include a new assessment center and daily operational office spaces.

Her dedication and professionalism were essential to the accomplishment of the mission. In July 2010, LTC Smith departs to become the Director of Physical Therapy at William Beaumont Army Medical Center.



**LTC Tracy A. Smith**  
**APFRI Deputy Director, USASMA**



# USASMA Annex Classes

**Leveraging Type-A Behavior: “Keeping the Sharp Edge of the Sword toward the Enemy”**

8 June Time: 0800 – 0900 Location: West Auditorium

**Restorative Sleep: “Retake the Night”**

17 June Time: 0800 – 0900 Location: West Auditorium

**Hands on Flexibility and Core Training:**

June 22 Part A, June 29 Part B, and July 13 Part C Time: 0800 – 0850  
Location: Assessment Center

**Intermediate Strength Training:**

24 June and 15 July Time: 0800 – 0850 Location: Assessment Center

**Hypertension: “The Silent Killer”**

1 July Time: 1200 – 1250 Location: West Auditorium

**Anger Management: “Balancing the Force/Threat Ratio”**

7 July Time: 0800 – 0900 Location: West Auditorium

**Executive Stress Management: “Sustainment Operations for Strategic Leaders”**

14 July 2010 Time: 0800 – 0900 Location: West Auditorium

## Word Search Puzzle



Find and circle all words that are found in the newsletter articles.

L	G	L	C	L	Y	Q	Z	W	W	R	T	H	S	S
C	O	L	W	I	L	L	I	A	M	S	G	Z	H	I
A	K	R	E	T	I	R	E	M	E	N	T	D	T	L
Y	S	C	E	Q	M	Q	L	P	I	C	L	L	Y	A
Z	T	T	G	T	P	J	K	N	H	C	O	M	M	F
P	W	I	H	A	S	V	E	W	H	F	L	T	J	Q
T	G	W	S	N	I	E	T	O	R	P	P	R	Y	J
K	O	T	X	N	R	G	L	U	I	N	D	A	M	O
Y	N	L	Q	C	E	E	I	O	N	V	P	R	W	E
A	Q	L	S	L	S	T	M	Z	H	F	N	Y	X	B
O	K	A	B	T	S	A	N	C	R	C	Z	P	M	E
B	S	R	E	L	X	B	D	I	U	I	L	W	W	Y
P	Z	R	X	A	Z	L	Q	X	H	Y	X	D	S	H
U	O	Y	J	I	Y	E	A	O	P	R	I	I	L	L
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APFRI
COLWILLIAMS
FRUITS
HDLCHOLESTEROL
INTENSITY
LDLCHOLESTEROL
MYTHS
PROTEIN
PSASCREENING
REALISTICGOALS
RETIREMENT
VEGETABLES

**Brain  
Fitness**

## Article Authors & Contributors

### **Does it Matter if the HDL Cholesterol is Low when LDL is also Low?**

LTC Heidi Kaufman, MS, RD, LD, APFRI, USAWC

### **Grilled Chicken with Spicy Fruit Salsa & Marinated Vegetable Toss**

LTC Heidi Kaufman, MS, RD, LD, APFRI, USAWC

Mrs. Cecilia Thomas, RD, APFRI, CGSC

### **Prostate cancer: To screen or not to screen**

CPT Geraldine Greany-Hudson, RN, MS, APFRI, USAWC

### **APFRI Addresses Three Common Fitness Myths**

Mr. Christopher J. Kusmiesz, MS, APFRI, USAWC

### **Sleep Your Way To Better Health**

CPT(P) Christopher A. Myers, Ph. D, APFRI, USAWC

### **Word Search Puzzle: Brain Fitness**

Mrs. Tracy S. McClung, MS, APFRI, CGSC

## Common Fitness Myths - cont.

### **Myth #3: Exercising at a lower intensity will burn more fat.**

A common misconception, often seen among people trying to lose weight, is that using lower exercise intensity will allow the body to burn more fat compared to higher intensities. This myth is further re-enforced by fitness equipment manufacturers that incorporate a “fat burning program” option into treadmills, ellipticals and other pieces of cardiovascular equipment. Manufacturers even go a step further by using a series of displays or charts on the console, corresponding to an age-based heart rate range, to let the exerciser know if they are in the “fat burning” zone.

This leads people to believe that if their heart rate goes above the “fat burning” zone, they are no longer using fat as an energy source to fuel exercise. This is simply not the case. The body is constantly using a wide range of fats and carbohydrates for fuel, but the percentage of each can shift based on exercise intensity.

The concept of burning more fat at a lower intensity has been taken out of context. It is true that at a lower training intensity, the body will preferentially use a higher percentage of fat as the main source of energy to fuel exercise. At higher exercise intensities, the percentage of fat burned decreases because the body prefers using extra carbohydrates to fuel the additional energy requirements. However, as the intensity increases, the absolute amount of fat used increases (Tremblay, Simoneau and Bouchard, 1994).

Exercising at higher intensity levels (60-80% of maximum heart rate) improves cardiovascular fitness and burns more fat than exercising at lower intensity levels (Giessing, 2003). Higher exercise intensities allow for a greater caloric expenditure per minute vs. lower intensity exercise. Individuals that are concerned with burning fat to lose weight should focus more on the total calories burned as well as exercising for cardiovascular benefits.

As you can see, there is a lot of misinformation floating around in the fitness community. Trying to keep up with new exercise science and research literature can, at times, be overwhelming and frustrating. If you have questions or need further clarification about a specific fitness topic, seek the guidance of a reputable source, such as an APFRI fitness professional, that can help steer you in the right direction.



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### Prostate Cancer: To Screen Or Not To Screen

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