



# What's New from APFRI

## June is National Men's Health Month



In this issue: PSA Information, Peer Support at Work, Exercising Safely in the Heat of Summer, Nutrition Tips and more...

APFRI PUBLICATION NO. 19

JUNE/JULY 2011

## PSA Testing: Understand the Issues

June/July Newsletter 2011

Army Physical Fitness Research Institute



Should I get a prostate screening antigen test? Since 1994, over a billion men have obtained a prostate-screening antigen test (PSA). However, there is a debate regarding the efficacy of screening for the PSA. Prostate cancer is the most commonly diagnosed cancer for men and the second leading cause for cancer-related death among men in the United States (U.S.).<sup>1</sup> While 30,000 men in the U.S. die from prostate cancer annually, only one in 100 men under age 55 die due to prostate cancer.<sup>1</sup> The PSA screening debate continued with the publication of two large studies in 2009: the European Randomized Screening Prostate Cancer (ERSPC) trial<sup>2</sup> and the Prostate, Lung, Colorectal and Ovarian (PLCO) Cancer Screening Trial.<sup>3</sup>

Over 182,000 men between the ages of 50 and 74 from seven European countries participated in the ERSPC study. Men were randomized into one of two groups; men with PSA screening and a control group, men without PSA screening. After nine years, there was a 20% lower rate of death due to prostate cancer among men with PSA screening as compared to the control group who did not receive PSA screening.

In the PLCO study, over 76,000 men in ten locations throughout the U.S. were screened for prostate cancer. Men were randomized into two groups, those who received screening with PSA and digital rectal exam and a control group who received "usual care" in which 52% had PSA screening by the sixth year of the study. After following the men for seven to ten years, the authors concluded that PSA screening offered no additional benefits or change in rates of death due to prostate cancer.

There are several limitations with both studies. First, the length of follow-up time may not be long enough to detect differences in the death rates of men because significant advancements with prostate cancer treatments prolong life. A second limitation is related to the lack of evidence to generalize the results to high-risk groups, such as individuals with a family history of prostate cancer or among African Americans. A final, major limitation of the PLCO study was the high rate of PSA screening in the control group which makes it difficult to show differences in death rates between the two groups.

Further analyses of the two studies indicate that men who have regular PSA screening tests have a higher chance of identifying prostate cancer early, whereas men who do not have a PSA screening test regularly have a higher probability of more advanced cancer when ultimately diagnosed. At this time, there is no conclusive evidence that death rates improve with an early diagnosis of prostate cancer. Of note, in up to 30% of men early screening may result in discovering a cancer that may never develop into a life-threatening problem.

Healthcare providers often order invasive tests, such as a prostate biopsy in the presence of a high PSA. It is important to note that prostate biopsies are not without risk. Men may develop complications, such as urinary or rectal bleeding, infection, or urinary retention.<sup>5</sup>

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## PSA Testing Cont.

Bottom line: More studies with a longer duration are needed to determine the impact of PSA screening over longer duration and for individuals in high risk groups. Because at least one major study found reduced death rates among those who received a PSA screen, APFRI offers PSA testing to males 40 years of age or older. APFRI realizes the importance of knowing your age-specific PSA levels in conjunction with your race-specific PSA risk factors. Since some research points to a single PSA test taken at or before age 50 predicts prostate cancer 30 years later, APFRI follows the recommendation of the American Urological Association in offering the PSA screening beginning at age 40. PSA testing is a personal choice and APFRI experts recommend discussing your decision to screen or not to screen with your healthcare provider.<sup>6</sup>

## Peer Support at Work

A recent study made a splash in the news by reporting people who work longer hours have greater risk of heart disease.<sup>1</sup> In this study, adults who worked 11 hours or more per day had a 67% increased risk of Cardiovascular Disease compared to those who worked 7 or 8 hours per day. Another recent article also found a similar relationship between overtime work and heart disease.<sup>2</sup>

How is this a men's health issue? The answer is that while both men and women can work overtime, for a variety of reasons men are more likely to put in long hours at their paid work at any point of an economic cycle. Men who remain employed during a recession such as we have recently experienced are especially more likely to work overtime. One recent survey found that women were twice as likely to work 30 to 40 hours per week, while men were twice as likely to work more than 50 hours per week.<sup>3</sup> The Bureau of Labor Statistics in 2005 roughly mirrored those findings, reporting women were twice as likely to work 30-40 hours per week, but men were more than twice as likely to exceed 40 hours of paid work per week. Of course we all can think of women who work long hours, too.

If too many hours are bad for your health, what can men and women do? The good news is that another recently published article suggested a possible antidote. In this study, after following initially healthy workers for 20 years, only one factor resulted in a reduced rate of mortality. That protective factor was *peer social support*. High levels of peer social support were associated with lower mortality from all sources.<sup>4</sup> Please note this effect was demonstrated for men and women.

If peer social support not only makes work more enjoyable but is also good for your health, what things can you do to encourage social support at work? The Army's Resiliency Training, part of Comprehensive Soldier Fitness, offers some great advice. To foster relationships at work, when a colleague expresses excitement about something, especially something they are proud of, respond with "Authentic Interest." Aim to give your colleague a chance to bask in the moment a little longer. The more you demonstrate you are a good listener this way, the more likely they are to form the bonds that create social support. Watch how people react and tailor your approach to each colleague. Avoid making a big fuss over someone who is especially modest.

There are other pitfalls to avoid such as hijacking the conversation. Imagine trying to explain something you think is very interesting to a colleague who essentially "one-ups" you by changing the subject to a story about themselves. It happens all the time and leaves most of us feeling disappointed. On the other hand, sometimes we feel disappointed because our colleagues respond with just a few perfunctory words of acknowledgement. The trick is to realize that sometimes we can be that colleague, the one so excited to tell our own story we forget to let somebody else finish theirs. Either that, or sometimes we can feel too busy to invest just a couple of minutes listening to a colleague tell a story.

Next time remember that spending those couple of minutes not only might make your workplace more enjoyable and foster a friendship at work; it might also be good for your health.



# Exercise and Hot, Sunny Days

The sunny days of summer are coming and with them plenty of heat and humidity. When exercising outdoors, particularly in these conditions, try to use extra precaution and planning for your daily exercise activities, especially if you are not accustomed to heat and humidity. A challenge, yes, but with the following recommendations the transition to outdoor activity will promote safety and reduce the risk of heat illness.

**Avoid the hottest time of the day.** Hot weather and exercise create extra stress on the heart and lungs. As the heart works to provide oxygen-rich blood to the working muscles, blood flow is also redistributed to the skin to cool the body. Since a portion of the blood flow is redistributed away from the exercising muscles, heart rate must increase to compensate for the decreased blood volume reaching the active muscles. Heart rate is also affected by the increase in internal temperature. For every degree the body's internal temperature elevates, the heart beats approximately 10 beats per minute faster.<sup>1</sup> As internal temperature increases, sweat production begins and the evaporation of sweat from the surface of the skin cools the body from exercise and air temperature. If the relative humidity is high, sweat cannot readily evaporate from your skin, placing an extra burden on your heart and raising body temperature even higher.



If you are not accustomed to exercising in hot conditions, use extra precaution and start slowly. Gradually increase both duration and/or intensity as your body becomes acclimated. Exercise in the morning or evening hours, thus avoiding the heat of midday. Even slightly decreasing your pace will help your body adapt and reduce the risk of heat stress. If you take medications, ask your doctor about taking additional precautions when exercising outdoors.

**Drink plenty of fluids before, during and after exercise.** Your body's ability to sweat and cool down depends on your hydration level. Begin exercise well hydrated by drinking fluids during the day and within the hour prior to exercise. Consume about 8 to 12 ounces 20 to 30 minutes prior to exercise.<sup>1</sup> Hydration during exercise is vitally important, especially if your workout exceeds 30 minutes. For short (<60 minutes), low to moderate intensity exercise, water is a good choice before, during and after exercise.<sup>2</sup>

Sports drinks of about 6-8% carbohydrates are good alternatives for moderate to high intensity exercise lasting longer than 60 minutes, or if training is intense or involves intervals.<sup>3</sup> Try to consume about 6 to 10 ounces every 30 minutes to help promote hydration. In order to enhance hydration, try to consume a snack that contains salt or sodium, especially if there is high sweat loss during exercise.

**Wear appropriate attire.** Loose fitting, light-colored and lightweight clothing is best. Dark clothes tend to hold heat. Wear a wide-brimmed hat to protect your face from the sun and use sunscreen, reapplying every 20 minutes during exercise.

Be fully informed regarding the symptoms of heat related illness. The following are known symptoms:

***Headache, Weakness, Nausea or vomiting, Dizziness, Muscle Cramps, Rapid heartbeat, and Fainting***

If any of these symptoms develop, cease exercise immediately, find some shade or get out of the heat. Drink fluids and, if symptoms persist, seek medical help immediately. If you have questions or need further clarification about a specific fitness topic, seek the guidance of a reputable source, such as an APFRI Health Fitness Specialist, who is able to guide you in the right direction.

***Have a safe summer!***

## The All American Beef Frank May Not Be the Best Choice



The 2010 Dietary Guidelines for Americans recently published the recommendation to limit the intake of solid fats from meats to maintain good health.<sup>1</sup> Other health organizations have long recommended the same strategy. While chicken and fish are routinely epitomized for their leanness and available sources of “healthy” omega-3 fats, the other common sources of protein, such as red meat, shell fish, and organ meats have been placed on the list of foods to limit or to eat on special occasions only because of their solid fat or cholesterol content. Now the research is out, suggesting that what matters even more is if the meat is processed or not.

Recently, researchers from France and the Harvard School of Public Health presented their findings at the American Heart Association convention in Atlanta, Georgia.<sup>2</sup> They used the collective data from a large population (>69,000) to evaluate the difference in risk for developing diabetes depending on meat consumption. In this study, those who ate an average of 2 ounces processed meat on five or more days per week were at 64% greater risk for developing diabetes than those who ate less than 2 ounces per week, even after they carefully controlled for individual differences in the diet such as fiber, carbohydrate, vegetable, fruit, and fish intake. The same association was not observed between diabetes and red meat consumption. This study referred to sausage, salami, ham, and pâté as processed meat, while red meats included beef, veal, horse, pork and sheep.

Considering the findings in this new study and the American Institute of Cancer Research (AICR) panel of experts’ review in 2007 of 7000 earlier studies which identified a link between processed meat consumption and the risk for colon and stomach cancers,<sup>3</sup> what can military leaders do to limit the risk to themselves and those they lead?

Leaders often visit food establishments on their installation and they have the power to influence the menus for official events. Leaders can discourage the use of hot-dogs and cold cuts in planning menus for fund raisers, parties, and missions. Because of low cost, convenience, and ease in preparation, these types of meats are often served in child care facilities, dining facilities, and fast food restaurants on military installations. In light of the fact that many Soldiers have processed meats in their barrack’s room refrigerator and many busy families depend on the same for dinner meals, including pizzas, subs, and hot-dogs, it can quickly add up to “over exposure.” Even though the AICR prudently recommends that “[we] try to think of processed meats as something [we] save for special occasions – maybe a modest serving of ham at Christmas or a hot-dog at a ball game,” as a result of these new research findings, APFRI suggests that leaders turn the table around to set a strong example for those they lead.

Some better options to consider are grilled cut chicken, foil baked fish, oven cooked roast or grilled flank steak, to just mention a few ideas for affordable bulk cooking for big group events. The Soldier and busy family should try to prepare meats in advance and individually freeze for later convenience. Home cooked roast beef or fresh ham serve well as cold cuts for sandwiches. Baking a full pan of chicken in the oven or on the grill and then individually wrapping and freezing for later can be a huge money saver while helping your family become healthier. Home cooked meats can later be used for a variety of meals such as chef salads, subs, and soups, or simply reheat and serve with a favorite frozen vegetable. A key to tasty leftovers is to not overcook the meat the first time it’s reheated.



By taking a strong leadership stand on the types of food to be served on your installation, you can significantly impact the health and readiness of those you lead. Ask an APFRI dietitian at <https://apfri.carlisle.army.mil> for more convenient and healthy menu ideas for your installation’s summer events.

## Luscious Berry Shake



Boost your calcium, vitamin C and D with this nutritious drink this summer:

2 cups low fat milk  
1 cup fresh (in season), or frozen, strawberries  
1 ripe banana, sliced  
2 tbsp orange juice concentrate (optional)  
1 cup ice

**Directions:** Place ingredients in a blender or food processor. Blend until smooth. Serve chilled for two!

**Nutrition Facts:** *Calories 220, Total Fat 3g, Saturated Fat 1.5g, Cholesterol 10mg, Sodium 110mg, Total Carbohydrate 41g, Dietary Fiber 4g, Intrinsic Sugars 31g, Protein 10g*

## Grilled Asparagus

Prepare this *seasonal* vegetable on the grill with your choice of fish for a quick home cooked and heart healthy meal:

1 lb fresh asparagus, trimmed  
1-2 tbsp extra virgin olive oil  
Dash of salt & fresh ground pepper



**Directions:** Preheat grill for high heat. Lightly coat asparagus spear with olive oil using a brush. Season spears lightly with salt and pepper. Grill for 2 to 3 minutes. Makes 4 generous servings.

**Nutrition Facts:** *Calories 90, Total Fat 7g, Saturated Fat 1g, Cholesterol 0mg, Sodium 75mg, Total Carbohydrate 4g, Dietary Fiber 2g, Intrinsic Sugars 2g, Protein 3g*

## CGSC Important Dates

Or <http://usacac.army.mil/cac2/cgsc/Events/APFRI/index.asp>



**For More Information:** <https://apfri.carlisle.army.mil> then click on **CGSC**

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

## USAWC Important Dates

### Lectures

*Implications of MBTI for Strategic Leader Responsibilities*

Tuesday, 14 June 2011 @ 1145-1245  
Bradley Room Auditorium-Upton Hall

*Back to Basics*

Wednesday, 15 June 2011 @ 1145-1245  
Bradley Room Auditorium-Upton Hall

*Essentials of Strength Training*

Thursday, 16 June 2011 @ 1145-1245  
Bradley Room Auditorium-Upton Hall

*Increasing Aerobic Power*

Friday, 17 June 2011 @ 1145-1245  
Bradley Room Auditorium-Upton Hall

*Durable Athletic Performance and Military Physical Training*

Monday, 18 July 2011 @ 1130-1230  
Bradley Room Auditorium-Upton Hall

*Face the Fats for a Healthy Heart*

Tuesday, 19 July 2011 @ 1230-1320  
Bradley Room Auditorium-Upton Hall

*Restorative Sleep: Retaking the Night*

Wednesday, 20 July 2011 @ 1230-1320  
Upton Hall-2nd Floor Auditorium

### Lectures Cont.

*Restorative Sleep: Retaking the Night*

Wednesday, 27 July 2011 @ 1215-1315  
Normandy Room-Collins Hall

*Elements of Strength*

Thursday, 28 July 2011 @ 1220-1315  
Normandy Room-Collins Hall

*Healthy Lifestyle Choices*

Friday, 29 July 2011 @ 0800-0915  
Normandy Room-Collins Hall

### Hands-On Fitness Classes

*Lumbar Stabilization*

Thursday, 16 June 2011 @ 0630-0730  
Thorpe Hall Gym-Third Floor

*Strength Training*

Friday, 17 June 2011 @ 0630-0730  
Thorpe Hall Gym-Third Floor

*Durable Athletic Performance and Military Physical Training*

Monday, 18 June 2011 @ 1130-1230  
Bradley Room Auditorium-Upton Hall

*Flexibility: Hands-On*

Tuesday, 21 June 2011 @ 0630-0730  
Thorpe Gym Hall-Third Floor

## USASMA Important Dates

### JUNE 2011

*Iron APFRI Awards Ceremony*

1 June 2011 @ 0800  
East Auditorium

*Running Shoe "What you need to know"*

8 June 2011 @ 0800-0850  
West Auditorium

*Class 61 Graduation*

17 June 2011 @ 1000  
East Auditorium

### JULY 2011

*WLC Welcome Brief*

11 July 2011 @ 1130

*NRC Welcome Brief*

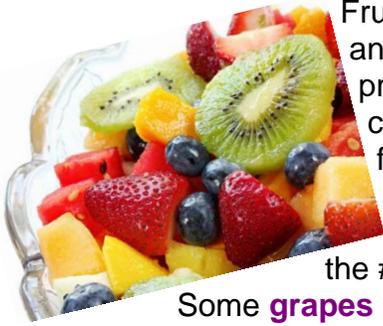
13 July 2011

*NRC Blood Draw*

15 July 2011  
Learning Resource Center

*NRC, WLC Staff & Faculty SMC Staff & Faculty Assessments: 18-23 July 2011*

# What Battle is Fruit Salad Preparing You For?



Fruit salad season is here! This summer picnic favorite is not only tasty and refreshing, it is a dish that is chockfull of nutrition. Fruits are comprised of vitamins, minerals, soluble fiber, natural sugars and also many contain “phytonutrients.” Phytonutrients (*phyto* = plant) are naturally formed chemical compounds that can potentially aid in the fight against several diseases.

Cardiovascular health is of extreme importance as heart disease is the #1 killer in the United States. Can fruit help you out with that? It might!

Some **grapes** contain flavanols that may contribute to better heart health. **Bananas** have an abundance of potassium, a mineral serving as an electrolyte that can normalize blood pressure by counteracting sodium’s effect of increasing blood pressure (hypertension). **Watermelon** has also been in the lime light as a recent study suggests that it may improve the aortic hemodynamincs of those with pre-hypertension. In addition, **watermelon** as well as **pink grapefruit**, contains lycopene which may reduce the risk of prostate cancer.

Fruit can also help you with another hot topic: increasing antioxidants. Antioxidants can fight against free radicals that may damage cells in your body. For example, **cantaloupe** contains beta carotene which is an antioxidant. Some other antioxidant fruits are **blueberries**, **strawberries**, **red grapes**, **cherries**, and **kiwis**. These fruits are in the anthocyanidin phytonutrient category and are therefore thought to possibly aid in maintaining brain function and a healthy immune system. **Kiwis** also have lutein, a phytonutrient that may help with healthy vision preservation. Consumption of these fruits is a great natural way of benefiting your health in many aspects. So next time you are at the summer barbeque, think twice before skipping the fruit salad!

## Authors & Contributors

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### ***What Battle is Fruit Salad Preparing You For?***

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# Resources

## **PSA Testing: Understand the Issues**

<sup>1</sup> ACS, *Cancer Facts & Figures 2006*. American Cancer Society, 2006: 1-54.

<sup>2</sup> F. Schroder, et al., "Screening and prostate-cancer mortality in a randomized European Study," *New England Journal of Medicine*, vol 360 (2009): 1320-8.

<sup>3</sup> G, L. Andriloe, et al., "Mortality results from a randomized prostate-cancer screening trial," *New England Journal of Medicine*, vol 360 (2009): 1310-9.

<sup>4</sup> M. Kerkhof, et al., "Effects of the correction for noncompliance and contamination on the estimated reduction of metastatic prostate cancer within a randomized screening trial (ERSPC section Rotterdam)," *International Journal Of Cancer*, vol 127 (2010): 2639-2644.

<sup>5</sup> Mia Djulbegovic, et al., "Screening for prostate cancer: systematic review and meta-analysis of randomized control trials," *BMJ*, vol 341 (2010): c4543.

<sup>6</sup> American Urological Association Policy Titles "Early Detection of Prostate Cancer." American Urological Association. <http://www.auanet.org/content/guidelines-and-quality-care/policy-statements/e/early-detection-of-prostate-cancer.cfm> (accessed June 1, 2011).

## **Peer Support at Work**

<sup>1</sup> M. Kivimaki, "Using Additional Information on Working Hours to Predict Coronary Heart Disease: A Cohort Study," *Annals of Internal Medicine*, vol 154 (April 2011): 457-463.

<sup>2</sup> Marianna Virtanen et al., "Overtime work and incident coronary heart disease: the Whitehall II prospective cohort study," *European Heart Journal* (March 2010).

<sup>3</sup> Iowa Workforce Development, "Respondents by Hours of Work By Week," [www.iowaworkforce.org/lmi/publications/genderwagestudy/genderwagestudy12.htm](http://www.iowaworkforce.org/lmi/publications/genderwagestudy/genderwagestudy12.htm) (accessed on 16 May 2011).

<sup>4</sup> Arie Shirom et al., "Work-based predictors of mortality: a 20-year follow-up of health employees," *Health Psychology* 30, no. 3 (May 2011): 268-275.

## **Exercise on Hot and Sunny Days**

<sup>1</sup> G. Blackburn, Cleveland Clinic, "Exercise and the Heat," <http://my.clevelandclinic.org/heart/prevention/exercise/exandheat.aspx> (accessed May 17, 2011).

<sup>2</sup> Sports, Cardiovascular, and Wellness Nutrition, "Exercise Hydration," Nutrition Fact Sheet, no 5 (2009), [http://www.scandpg.org/local/resources/files/2010/SD-USA\\_Fact\\_Sheet\\_Performance\\_Hydration\\_Jul\\_2010.pdf](http://www.scandpg.org/local/resources/files/2010/SD-USA_Fact_Sheet_Performance_Hydration_Jul_2010.pdf) (accessed May 17, 2011).

<sup>3</sup> Sports, Cardiovascular, and Wellness Nutrition, "Performance Hydration," Nutrition Fact Sheet, no 12 (2010), [http://www.scandpg.org/local/resources/files/2009/SD\\_USA\\_Fact\\_Sheet\\_Exercise\\_Hydration\\_Apr09.pdf](http://www.scandpg.org/local/resources/files/2009/SD_USA_Fact_Sheet_Exercise_Hydration_Apr09.pdf) (accessed May 17, 2011).

## **The All American Beef Frank May Not Be the Best Choice**

<sup>1</sup> U.S. Department of Agriculture and U.S. Department of Health and Human Services, *Dietary Guidelines for Americans, 2010* (January 31, 2011), [www.dietaryguidelines.gov](http://www.dietaryguidelines.gov).

<sup>2</sup> Laura Tondeur et. al., "Red and Processed Meat Intake and Risk of Incident Type 2 Diabetes among French Women," poster presentation and abstract from the Joint Conference: Nutrition, Physical Activity and Metabolism and CVD Epidemiology and Prevention 2011 Scientific Sessions, Atlanta, GA, American Heart Association, March 23, 2011.

<sup>3</sup> The American Institute for Cancer Research and the World Cancer Research Fund, *Food, Nutrition, Physical Activity and the Prevention of Cancer: a Global Perspective (November, 2007)*, [www.dietandcancerreport.org](http://www.dietandcancerreport.org).

## **What Battle is Fruit Salad Preparing You For?**

<sup>1</sup> Arturo Figueroa et al., "Effects of Watermelon Supplementation on Aortic Blood Pressure and Wave Reflection in Individuals with Prehypertension: A Pilot Study," *American Journal of Hypertension* 24, no. 1 (2011): 40-44.

<sup>2</sup> Roberta Larson Duyff, *American Dietetic Association: Complete Food and Nutrition Guide*, 3<sup>rd</sup> ed. (New Jersey: John Wiley & Sons, Inc., 2006), 109-111.