



# Fruits and Vegetables for Your Body and Budget

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**NAVY AND MARINE CORPS PUBLIC HEALTH CENTER**  
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# Webinar Objectives:

- **Explain why there is an effort to increase the consumption of fruits and vegetables among our military personnel**
- **Describe the nutritional advantages of fruits and vegetables**
- **Identify ways to increase fruit and vegetable consumption while maintaining a budget**
- **Illustrate food preparation and storage tips to get the most out of meals**



# Why be Concerned about Fruit & Vegetable Consumption among our military personnel?

- **DoD Health Behavior Survey Among Military Personnel Shows:**
  - Low consumption of fruits and vegetables
  - High consumption of unhealthy foods and drinks
- **Fleet & Marine Corps HRA Results:**
  - Low consumption of fruits and vegetables
  - High fat consumption



# 2011 Survey of Health Related Behaviors Among Military Personnel



- **Consuming 2 or More Fruits Each Day**
  - **Healthy People 2020 Goal: 75%**
  - **National Baseline (2009): 32.2%**
  - **Total DoD: 22.2%**
  - **Navy: 23.9%**
  - **USMC: 20.7%**



# 2011 Survey of Health Related Behaviors Among Military Personnel



- **Consuming 3 or More Vegetables Each Day**
  - **Healthy People 2020 Goal: 50%**
  - **National Baseline (2009): 26.3%**
  - **Total DoD: 12.9%**
  - **Navy: 13.7%**
  - **USMC: 10.1%**



# 2011 Survey of Health Related Behaviors Among Military Personnel



## Additional Behaviors Related to Nutritional Status:

	<u>DoD</u>	<u>Navy</u>	<u>USMC</u>
<b>Snack Foods (2 or more/day)</b>	<b>6.0</b>	<b>7.0</b>	<b>7.0</b>
<b>Sweets (2 or more/day)</b>	<b>5.9</b>	<b>6.2</b>	<b>6.4</b>
<b>Sugary Drinks (2 or more/day)</b>	<b>11.2</b>	<b>11.1</b>	<b>13.2</b>
<b>Overweight</b>	<b>51.2</b>	<b>51.3</b>	<b>52.8</b>
<b>Obese</b>	<b>12.4</b>	<b>14.9</b>	<b>4.9</b>



# Fleet & Marine Corps HRA (CY 2012 Data: 198,529 Responses)

- **Eating 2 or More Fruits/Day: 61%**
- **Eating 3 or More Vegetables/Day: 36%**
- **Intake of High Fat Foods: 37% (at least 3-5 times per week)**



# 2011 Survey of Health Related Behaviors Among Military Personnel



## Dietary Supplement Use:

	<u>DoD</u>	<u>Navy</u>	<u>USMC</u>
*Legal Body Building	16.3	14.7	23.5
*Weight Loss	11.0	10.8	14.7
*Herbal Supplements	9.4	9.8	10.3
* <i>Once a day or more</i>			



# Nutritional Advantage of Fruit and Vegetables

- Reduce the risk of cancer, other chronic diseases:
  - Heart disease / heart attack and stroke
  - Obesity
  - Type 2 diabetes
  - Lower cholesterol
- Potassium rich, part of an overall healthy diet may lower BP, may lower risk of developing kidney stones and help to decrease bone loss
- Vitamins, minerals, fiber, antioxidants, *phytochemicals* - important for good health
- Zero cholesterol, low fat and calories BUT filling!
- Water & fiber adds volume, eat the same amount of food with fewer calories
  - Fiber = proper bowel function
  - Helps reduce constipation and diverticulosis
- Vitamin A = eyes and skin, helps protect against infections
- Vitamin C = helps heal cuts, wounds, healthy teeth and gums healthy, iron absorption



# Nutritional Advantage of Fruit and Vegetables

- Use as a tool to help **lose weight!**
  - Fills you up
  - Controls cravings of processed foods and overeating
  - **Low calories** - substitute fruits and veggies in place of higher-calorie ingredients (examples on next slide):



[http://www.cdc.gov/nccdphp/dnpa/nutrition/pdf/CDC\\_5-A-Day.pdf](http://www.cdc.gov/nccdphp/dnpa/nutrition/pdf/CDC_5-A-Day.pdf)



# Consuming Fruits & Vegetables While Staying within your Budget

- **Grow your own garden! Learn how at:**  
<http://www.cdc.gov/Features/gardeningtips/>
- **Shop at your local farmers market. To find one near you, go to:**  
<http://search.ams.usda.gov/farmersmarkets>
- **Only buy what you need for the week by planning your meals, making and sticking to a list**
- **Shop savvy by checking local ads and in-store sales**
- **Freeze near ripe fruits and vegetables for smoothies or use in recipes**
- **Buy in bulk when on sale and can or freeze fresh items. Learn how to can safely at:** <http://nchfp.uga.edu>



# Consuming Fruits & Vegetables While Staying within your Budget

- **Compare the per serving cost of fresh, canned and frozen. If buying canned, be aware of the sodium content!**
- **Look for store brands when possible**
- **Avoid pre-washed, ready-to-eat and processed items if the convenience doesn't justify the additional cost**
- **Prepare and freeze extra servings of vegetable soups, stews and casseroles**
- **Keep vegetables fresh longer by waiting to prepare and wash when ready to use them**
- **Know the life span**



# Food Preparation Tips / Meal Substitutes

## Breakfast

- **Substitute spinach, onions, or mushrooms for one of the eggs or half of the cheese in your morning omelet - Vegetables add volume, flavor to the dish w/ fewer calories than egg or cheese**
- **Cut back on the amount of cereal in your bowl, add some sliced bananas, peaches, or strawberries - Eat a full bowl, but with fewer calories**

## Lunch

- **Substitute lettuce, tomatoes, cucumbers, or onions for 2 ounces of the cheese and 2 ounces of the meat in your sandwich, wrap, or burrito - Fills you up with fewer calories**
- **Add a cup of chopped vegetables: broccoli, carrots, beans, or red peppers, in place of 2 ounces of the meat or 1 cup of noodles in soups - Helps fill you up with fewer calories**



# Food Preparation Tips / Meal Substitutes

## Dinner

- **Add in 1 cup of chopped vegetables: broccoli, tomatoes, squash, onions, or peppers in place of 1 cup of the rice or pasta in your favorite dish - Will be just as satisfying but have fewer calories**



# Phytochemicals /Antioxidants

- Almost exclusively and unique to plant life
- Certain phytochemicals = antioxidants, flavonoids, flavanols, flavanones, isoflavones, catechins, anthocyanins, carotenoids, polyphenols.

**CHOOSE COLORS!**

- Prevention and treatment of health conditions, including cancer (10% genetic), heart disease, diabetes, and high blood pressure.
- Help prevent formation of potential carcinogens.
- **Experts suggest people can reduce risk of cancer significantly by eating more fruits, vegetables, and other foods from plants that contain phytochemicals**

<http://www.cancer.org/treatment/treatmentsandsideeffects/complementaryandalternativemedicine/herbsvitaminsandminerals/phytochemicals>



# Food Preparation Tips



- **Use fat-free or low-fat cooking techniques**
  - **Steam vegetables, use low-calorie or low-fat dressings, use herbs and spices to add flavor**
  - **Eat your fruit raw to enjoy its natural sweetness**
- **Canned or frozen fruits and vegetables good options when fresh not available**
  - **Be careful, choose without added sugar, syrup, cream sauces**
- **Choose whole fruit over fruit drinks and juices (no fiber)**
  - **Better to eat whole fruit because it contains fiber**
  - **6-ounce orange juice = 85 calories/medium orange = 65 calories**



# Food Preparation Tips



- **Whole fruit = bigger size snack than dried fruit, same calories**
  - **Small box of raisins (1/4 cup) is ~ 100 calories = 1 cup of grapes**
- **Puree to make soups and dips**
- **Combine to make salsas and chutneys**
- **Grill, sauté, roast stir-fry, slow cook**
- **Add spices**



# Storage Tips

## Fresh

- Use within a few days. Some can be left at room temperature to ripen, then refrigerated

## Frozen

- Store at 0°F or less
- Use before the “use by” date on the package
- As a rule, use within 6 months



# Storage Tips

## Canned

- Check the “use by” date on the can
- Most canned goods have a shelf life of about 2 years
- Store at room temperature (about 75°F)

## Dried

- Store in a cool, dark place (warmth makes the food spoil faster)
- Some dried foods may be refrigerated- check the package
- Use before the “Use by” date on the package
- Most will last from 4 months to a year



# Strategic Approach to Incorporate **More!**

- **Meal Time Progression:**
  1. **Veggies**
  2. **Main Entrée with Sides**
  3. **Fruits and/or dessert**
- **1 serving of either a fruit or veggie at each meal = healthy habit**
- **CHALLENGES = flavor, taste, texture, goes bad fast, no time, etc.**
  - **Experiment! Create tolerance = get satisfaction!**
  - **Soup, puree, dips, etc.**
  - **Can be quick prep OR slow prep**
  - **Create your own juices by juicing!**



# Strategic Approach to Incorporate **More!**

- **Buy any and all types!**
  - Fresh, frozen, dried, canned, juice, they can ALL be part of a healthy intake. Don't limit yourself!
- **Meat, Dairy, and Cheese = more expensive than fruits and vegetables**
  - Don't really need meat, dairy, or cheese in every meal
  - Make a plan, buy more fruit, vegetables, beans, peas, and soy products.



# Strategic Approach to Incorporate **More!**

- **Keep fruit in your house. Can't eat it if it's not there!**
- **Too busy to wash and cut fruits?**
  - **Purchase fruits that are already washed and pre-cut**
  - **You may be more likely to eat it**
  - **Not wasting money because they spoil before you eat them**
- **At breakfast, have a glass of 100% orange or grapefruit juice.**



# Strategic Approach to Incorporate **More!**

- Buy in-season = flavor is peak, price is more affordable
- Plan meals around vegetable as main dish:
  - Vegetable soup / stir fry
- Low-fat veggie dip to make raw vegetables more snack-friendly:
  - Raw broccoli, red and green peppers, cauliflower, celery sticks, baby carrots
- Salads not filling you up?
  - Add a greater variety of veggies (peppers, broccoli, tomatoes carrots)
  - Add lean protein = make meal more satisfying
- Veggie pizza!



# Resources:

- DoN “Fruits & Veggies- More DOES Matter” video (NMCPHC)
- NMCPHC Sept. HP Toolbox: <http://www.med.navy.mil/sites/nmcphc/health-promotion/Pages/hp-toolbox-september.aspx>
- Crews into Shape Challenge: <http://www.med.navy.mil/sites/nmcphc/health-promotion/Pages/crews-into-shape.aspx>
- ChooseMyPlate: <http://www.choosemyplate.gov>
- CDC Nutrition for Everyone (Fruits & Vegetables) website: <http://www.cdc.gov/nutrition/everyone/fruitsvegetables/index.html>
- Produce for Better Health Foundation: <http://www.fruitsandveggiesmorematters.org>
- Human Performance Resource Center (Link to Operation Supplement Safety (OPSS)): <http://humanperformanceresourcecenter.org>
- USDA: [http://www.teamnutrition.usda.gov/Resources/recipes\\_for\\_healthy\\_kids.html](http://www.teamnutrition.usda.gov/Resources/recipes_for_healthy_kids.html)



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# Continuing Education and Feedback

- **NMCPHC is a designated provider of continuing education contact hours (CECH) in health education by the National Commission for Health Education Credentialing, INC. This program is designated for Certified Health Education Specialists (CHES) to receive up to 1 total Category I continuing education contact hour.**
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