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North County Fire Authority Health & Wellness Newsletter

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Topics:

- The Healthy Firefighter
- Nutrition of the Wildland Firefighter
- Carbs, Fat & Protein
- Healthy Recipe

Safety Tip

Use eye protection
90% of eye injuries are preventable

Workout Tip

Exercise larger muscle groups
Targeting larger muscles such as legs, back, abdomen and chest burns calories and improves posture.

The Healthy Firefighter

Staying healthy both physically and mentally is paramount to optimal job performance. In this issue and to prepare for the upcoming fire season, we will discuss Health and Wellness for the Wildland Firefighter as well as to provide a healthy recipe to enjoy in station or try at home.



Fire on San Bruno Mountain

Nutrition of the Wildland Firefighter

Depending on the workload of the firefighter, intake of calories should range from 2,000 to 6,000 calories per day. During the fire season is not the best time to start a diet if you believe you will be deployed on a

strike team or will have a heavier workload locally. Firefighters should recognize the importance of the dietary intake of carbohydrates, fat and protein.



In addition to food consumption, hydration with water or sport drinks maintain the body's fluid balance. Working on the fire ground may generate up to 580 calorie loss through evaporation. Fluids must be maintained to operate our thermo regulating system to avoid heat cramps, heat stroke and severe dehydration. Ideally during constant firefighting activities, an intake of 1 quart of fluid an hour. Remember to pre and post hydrate. The best measurement of proper fluid intake is urine color. Pale clear is the goal.

Carbohydrates:

The intake of carbohydrates is converted to glucose and stored in the liver and muscles as glycogen. The importance of carbohydrate intake allows the body to use sugars appropriately. During extreme work, carbohydrates (sugars) are used to fuel the brain and nervous system. High levels of continuous physical activity, such as digging fire line for hours, increase the daily carbohydrate requirements. Each gram of carbohydrate provides 4 calories of energy. Examples of carbohydrate rich foods include whole-grain products, beans, rice, corn, peas, potatoes, fruit, fruit juice, milk, yogurt, energy bars, and most sport drinks. During moderate work activity, firefighters need 40 grams of carbohydrate each hour from snacks and sport drinks. Studies on firefighters show that eating carbohydrate improves work output, immune function, blood glucose, ability to think clearly and improves mood stability.

Fat:

Fat helps to carry essential nutrients throughout your body and serves as a reserve for energy storage. Fat intake should provide 20 to 35 percent of daily calories. Only one-third of the fat should come from saturated fats such as butter, lard, dairy fat. The balance of fat should come from monounsaturated and polyunsaturated fats as seen in olive, canola, and peanut oils or from nuts such as almonds, hazelnuts, and olives. If a firefighter needs 4,000 calories per day for heavy work, one-quarter or 1,000 calories can come from fat. Each gram of fat has 9 calories which means 111 grams (4 ounces) of fat per day is required.

Protein:

Proteins function as building blocks for bones, muscles, cartilage, skin, and blood. They are also building blocks for enzymes, hormones and vitamins. Wildland firefighters require 1.2 to 1.8 grams of protein per kilogram of body weight per day, with 1.2 grams required for moderate work and 1.8 grams required for prolonged hard work under adverse conditions. Protein rich foods are not limited to beef, chicken, fish, pork, cheese, sunflower seeds, almonds and tofu.

After the fire season is over, modify your diet and resume to a regular exercise plan to maintain weight. Providing wellness and a culture of safety benefits all of us and the communities we serve.

Healthy Recipe

Bow-tie Pasta with Beef and Tomatoes

Preparation and Serving

Time: 20 minutes

Servings: 4

Required Ingredients:

2 cups uncooked farfalle (bow-tie) pasta (5 oz)

1 tablespoon olive oil

1 cup frozen stir-fry bell peppers and onions

1 lb. thinly sliced beef

1 can (14.5 oz) Italian-style stewed tomatoes, undrained

1 teaspoon garlic salt

1/4 teaspoon pepper

Fresh basil, if desired

Freshly shredded Parmesan cheese, if desired

Preparation:

Cook and drain pasta as directed on package. Meanwhile, in 12-inch skillet, heat oil over medium-high heat. Cook frozen stir-fry vegetables in oil 3 minutes, stirring frequently. Stir in beef. Cook 5-6 minutes, stirring

frequently, until beef is no longer pink. Stir in tomatoes, garlic salt and pepper. Cook 2-3 minutes, stirring frequently and breaking up tomatoes slightly with spoon, until mixture is hot. Stir in pasta. Cook 1-2 minutes, stirring constantly, until pasta is well coated & hot.

