# THE NUCLEAR BOY SCOUT



In 1994 David Hahn, a 17yearold from Detroit, Michigan, learned that it was possible to find small amounts of radioactive material in common store bought items. Americium241, for example, is found in most smoke detectors. The scienceminded Boy Scout set his sights on earning the (nowdiscontinued) "Atomic Energy Badge"...by building a nuclear reactor in his mother's backyard shed.

First, he had to create a "neutron gun" (the nuclear reactions that power most nuclear plants are set off by bombarding a radioactive element, usually uranium, with neutrons). Hahn collected Americium241 from hundreds of smoke detectors and packed them into a hollow piece of lead with a tiny opening. Radiation can't pass through lead, so the radiation from the americium241 could now only escape through that pinhole—as a focused beam. Hahn covered the hole with a thin strip of aluminum, which reacts to radiation by ejecting neutrons. He now had his "neutron gun."





#### Hahn's accelerator



Over the next several months, Hahn attempted to create a nuclear reaction by shooting different radioactive substances with his neutron gun. That included thorium232, which can be found in gas camping lanterns, and beryllium, which he stole from a chemistry lab. After that, he acquired some pitchblende, a type of rock that contains small amounts of uranium. Hahn never succeeded in creating a nuclear reaction...but he did create extremely dangerous levels of radiation—more than 1000 times normal levels. The fiasco finally ended when police stopped Hahn one night in August 1994, and he told them he had radioactive substances in his car.

The FBI and the Nuclear Regulatory Commission were immediately called, a Federal Radiological Emergency Response Plan was initiated, and Hahn's mother's property was designated a hazardous materials site. The shed, along with all of its contents, was buried at a radioactive waste disposal site in Utah. Hahn refused medical evaluation, despite having been told that he had been exposed to more radiation than a person can safely endure...in an entire lifetime.

Postscript: In August 2007, the 30yearold Hahn was arrested. He pled guilty...to stealing several smoke detectors. He was sentenced to 90 days in jail. Then, in 2016, he died. Cause of death: unknown. 39 years of age.\_

### List of Daily Healthy Food Intake at Age 70

By Michelle Kerns Updated December 14, 2018

A 70-year-old with a diet that contains plenty of fiber, potassium, calcium, vitamin C and vitamin A will be less likely to develop high blood pressure, osteoporosis, heart disease, diabetes and certain types of cancer, says the U.S. Food and Drug Administration. The elderly can also benefit from consuming less total fat, saturated fat, sodium and cholesterol. By just using a few guidelines for planning healthy meals, a senior can make big changes in his health. Talk to your doctor if you need help designing a balanced diet.

#### Protein

A 70-year-old needs to include high-protein foods like poultry, lean beef or pork, eggs, seafood, beans and legumes, nuts, seeds or soy products in their diet every day. A man who is 70 years old should have 5.5 ounces of protein-rich foods daily, while a woman of the same age needs 5 ounces. A whole egg, 1/4 cup of cooked beans, 1/2 ounce of nuts or seeds and 1 ounce of meat, seafood or poultry all count as 1 ounce.

To keep her cholesterol, fat and saturated fat intake low, <mark>it's best for an elderly person to get more of her protein from seafood, poultry and plant-based sources than meat, particularly processed meat.</mark>

#### Grains

According to the U.S. Department of Agriculture, a 70-year-old woman needs to have 5 ounces of grains per day, and a 70-year-old man needs 6 ounces. An ounce of grains is equivalent to one slice of bread, one small tortilla, 1 cup of breakfast cereal or 1/2 cup of cooked rice, pasta or cereal grains like oatmeal.

At least half of these grains should be from whole-grain sources, like brown rice, whole-wheat bread and whole-grain pasta since they have a higher fiber and nutrient concentration when compared to refined grain products. If you're not certain about the fiber content of a product, the FDA advises choosing items that are identified on their nutrition facts label as providing 20 percent or more of your recommended daily fiber intake per serving.

#### Dairy

Getting enough dairy products daily can help the elderly avoid bone thinning and elevated blood pressure. If you're a 70year-old man or woman, you should have 3 cups of dairy products every day. A cup of yogurt or milk, 2 cups of cottage cheese, 1.5 ounces of hard cheese such as Parmesan and 1/3 cup of shredded cheese all count as a i-cup dairy serving. Avoid full-fat dairy items in favor of low- or non-fat milk or yogurt and reduced-fat cheese in order to control your fat intake.

#### Fruits

A 70-year-old man needs 2 cups of fruit per day; a 70-year-old woman needs 1 1/2 cups. A 1-cup serving is typically one medium-sized piece of fresh whole fruit like an apple or pear, 1 cup of sliced fruit, 1 cup of loo percent fruit juice or 1/2 cup of dried fruit. Canned fruit can also count towards your fruit requirement, though you should pick brands that feature fruit packed in unsweetened fruit juice, not a sugary syrup.

### Vegetables

Vegetables provide the elderly with fiber, vitamins, minerals and a wide variety of phytochemicals. Women who are 70 years old require at least 2 cups of vegetables daily, while a 70-year-old man should get 2 1/2 cups per day. You can count 1 cup of most raw, cooked or canned vegetables as a serving, though i cup of vegetable juice and 2 cups of raw leafy greens such as escarole, romaine lettuce or spinach are considered equivalent to a 1-cup vegetable serving as well.

#### Fats

The American Heart Association advises that everyone over the age of 70 should get no more than 25 to 35 percent of their daily calories from fat. Saturated fat should be less than 7 percent of your caloric intake per day, and you should consume as little trans fat as possible. To stay within these guidelines, a 70-year-old man needs to limit himself to 6 teaspoons of fats and oils a day. A woman of the same age should aim to have no more than 5 teaspoons daily. Avoid butter and hydrogenated oils; instead, the best fat sources are nuts, avocados, seeds, margarine and vegetable oils like olive, safflower or canola oil.

## **Over-70 Adults Get New Food Pyramid**

#### Stress on Nutrient-Rich, High-Fiber Foods, Not Supplements

By Daniel J. DeNoon FROM THE WEBMD ARCHIVES

Dec. 20, 2007 -- A prominent nutrition group has updated its food pyramid for over-70 adults, stressing nutrient- and fiber-rich foods over supplements.

People tend to become less active and to eat less as they age. This makes them vulnerable to getting too few nutrients, note Tufts University nutrition expert Alice H. Lichtenstein, ScD, and colleagues.

Moreover, older adults may not be as Internet savvy as younger adults, making it hard for them to use the USDA's official, web-based "MyPyramid" food guide. So Lichtenstein's team has updated their 1999 "Modified Food Guide Pyramid" for older adults to create their new "Modified MyPyramid for Older Adults" in print form.

"The basic message in the Modified MyPyramid for Older Adults is that it is preferable to get essential nutrients from food rather than supplements, ," Lichtenstein and colleagues note.

However, a little flag flying atop the pyramid signals seniors that supplements or fortified foods -- particularly those containing calcium, vitamin D, or vitamin B-12 -- may be helpful for many seniors but not for all.

At the bottom of the pyramid are icons representing physical activities appropriate for healthy seniors. Next comes a row of water glasses, stressing the importance of fluid intake for older people.

Above these rows, the different food groups portray healthy choices in forms -- such as packages of frozen vegetables -easily accessible to seniors.

Emphasis is on:

- Whole grains and a variety of grains
- Variety and nutrient-density of nuts and vegetable,
- Low-fat and nonfat dairy foods, including milk products with reduced lactose
- Oils low in saturated fats lacking trans fats
- Low-saturated fat and vegetable choices in the meat-and-beans food group
- Fiber-rich foods in all food groups

"It is important to communicate to older adults that eating should remain an enjoyable experience," Lichtenstein and colleagues note. "The guidance provided can be used as a road map and should be adaptable so it can accommodate many different dietary preferences, patterns, and lifestyles."

Lichtenstein and colleagues provide detailed recommendations in an article in the January 2008 issue of The Journal of Nutrition.

Provided by the Jean Mayer USDAHuman Nutrition Research Center on Pging, Tufts University, Boston, MA

Leading researchers have adapted the new food pyramid to the needs of older adults. The revised pyramid emphasizes exercise, getting enough fluids, taking vitamins, and eating frozen or canned fruits and vegetables along with fresh.(( sic) I don't know fresh what?)



### That Glow

#### THAT HEALTHY RADIOACTIVE GLOW



Marie and Pierre Curie discovered radium in 1898, but it took decades of research for the long-term effects of radiation exposure to be understood. But in the interim, the general public regarded the stuff with almost superstitious awe. After all, it glowed with beautiful phosphorescence!



Within a few years of its discovery, radium was—with no evidence whatsoever—being marketed as a restorative for youth and vitality. For that healthy glow, people used <u>radium-laced toothpaste and face powder.</u>



Patients soaked in irradiated water to relieve rheumatism; heating pads loaded with radioactive on soothed arthritis.



Hand Cleaner - Advertised - Takes off everything but skin





In particular, radium was reputed to cure sexual impotence It shed its magical light in places where the sun don't shine as suppositories and in the form of slender rods of radium-impregnated wax, to be inserted into the urethra. (Radium-dusted undergarments provided a less invasive option.

### **VITA RADIUM SUPPOSITORIES**

FOR RESTORING SEX POWER

Artual Size

VITA RADIUM SUPPOSITORIES, for rectal use by men, are tone restorers of sex and energizers for the entire nervous, glandular and circulatory systems. These Suppositories contain a result-producing amount of highly refined soluble RADIUM, carried in a cocoa butter base. The radium is absorbed thru the walls of the lower colon, enters the blood stream and is carried to all parts of the body —to the weakened organs that need its vitalizing aid. After leaving its durably HEALTHY RESULTS, the radium is gradually eliminated in about three days. Vita Radium Suppositories are guaranteed entirely harmless. Recommended for sexually weak men who, however, should use the NU-MAN Tablets in connection for best results. Also splendid for piles and rectal sores. Try them and see what mode escults you get!

But then consumers and people who worked with radium started dying of cancer



This picture is the before and after of the same girl.

Now you can be grateful for those due-diligence regulation on the pharmaceutical industry. it may take

years for innovative treatments to reach drugstores—but that's the trade-off for making sure that your heating pad doesn't give you cancer, or the vaccines may have some other deleterious effect.