Nutrition for Family Living

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March, 2004 Topics

Fat Alternatives: Reading Label Ingredients
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Fat Alternatives: Reading Label Ingredients

Brought to you by Leah Whigham and Sherry Tanumihardjo

Many food manufacturers are developing ways to reduce the fat content in the foods they sell. There are 4 types of fat replacers: those made from carbohydrates (sugars and starches), proteins, and fats, and those that are synthetic or man-made. Some fat replacers are digested and absorbed by the body, so they do contribute energy to your diet, but typically not as much as fat.

Carbohydrate-based fat replacers: These are made from modified food starches, gums, grain-based fibers, fruit purees and pastes, maltodextrins, and dextrins. They work by replacing bulk, adding moisture or fiber, or absorbing water thereby forming gels that mimic the texture and mouth feel of fat. Examples include Oatrim and Z-Trim. Both are creamy and stable in cooking and baking, but not frying. Oatrim (brand name Oatrim and TrimChoice) is made from oat flour and has 1-4 Calories per gram. Uses include ice creams, frozen desserts, soups, salad dressing, cheeses, peanut butter, mayonnaise, baked goods, meats, cereals, and milks. Z-Trim is made from seed hulls of oats, soybeans, peas and rice or from the bran of corn or wheat. It has 0 Calories per gram and adds fiber to the foods. Uses include baked goods, cheeses, meats, and milks.

Protein-based fat replacer: "Microparticulated" protein (brand name Simplesse and K-Blazer) is made from egg white, milk, or soy protein processed into tiny particles which feel and taste like fat. They provide 1-4 Calories per gram, and are stable in cooking and baking, but not frying. Uses include frozen desserts, dairy products, sauces and soups, dressings, baked goods, and coffee creamer.

Fat-based fat replacers: Salatrim (brand name Benefat) and Caprenin are actually fats (triglycerides), but they are not as easily digested by the body as the fats typically found in the diet. They have properties similar to fat, but contribute about 5 Calories per gram instead of 9 Calories per gram. Uses include candies, chocolate coatings, dairy products, confections, desserts, crackers, and cocoa butter.

Synthetic fat replacer: Olestra (brand name Olean) is made from sucrose and fatty acids (also called sucrose polyester) and provides 0 Calories per gram because it is not absorbed by the body. It has the same properties as fat such as stability in frying, cooking, and baking. Uses include fried snack foods such as chips, crackers, and cheese puffs. Olestra is safe to eat, but some people experience intestinal discomfort/distress such as cramping and/or diarrhea. Also, there was some concern that high amounts of olestra in the diet would lead to inadequate absorption of fat-soluble vitamins (A, D, E, K) because olestra binds to these vitamins. Therefore, all olestra containing products have been supplemented with these vitamins. However, as long as olestra-containing snack foods are eaten in moderation, there should not be need for concern about vitamin losses or intestinal distress.

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Using fat replacers in your diet: Although fat-replacers can offer people a way to decrease their total calorie and fat intake, moderation of overall food consumption is the best goal. Also, keep in mind that just because a product is labeled "low-fat," does not mean it is low in calories. Often times, when fat is replaced, extra sugar is added to compensate for the flavor - so read the label.

Fat and Food Labels: The following claims are defined for one serving:

Fat-free	Less than 0.5 gram fat
Low-fat	3 grams or less fat
Reduced or less fat	At least 25% less fat as compared with a standard serving size of the traditional food
Light	One-third fewer calories and/or 50% less fat as compared with a standard serving size of the traditional food

Reference used:

Understanding Nutrition, by E.N. Whitney and S.D. Rolfes, 9th Edition.

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Avoiding Portion Distortion

Brought to you by Anne Escaron, Leah Whigham and Sherry Tanumihardjo

In our super-size it society, it is tough to limit ourselves to healthy portion sizes. Experts have developed the Food Guide Pyramid to simplify this process. Below are some tips to help us remember what a serving size is from each of the major food groups.

Beginning with fruits and vegetables, picture a baseball to estimate the amount in one serving. For raw, leafy vegetables, a portion about the size of your fist (1 cup) is equivalent to one serving. For other cooked or raw chopped vegetables, this same amount counts as two servings. In addition to remembering to eat fruit and vegetables, recalling how big a serving size is, can help us achieve the goal of consuming five to nine servings of fruits and vegetables daily.

Moving on to the bread, cereal, rice, and pasta group, the size of your fist is equivalent to TWO servings of pasta or rice. Another way to remember this quantity is that one serving of cooked pasta or rice is about the size of an ice-cream scoop. For breakfast cereal, a large handful of cereal is one serving. Also, 1 piece of bread is a single serving. The Food Guide Pyramid recommends 6-11 servings daily from this group.

A portion of fish, chicken, or meat the size of a computer mouse represents one serving (2-3 ounces). Or for those card sharks among us, just picture a deck of cards. While we might prefer to put something else in it, an ice-cream scoop-sized portion (1/2 cup) of cooked dried beans or legumes will count as one ounce of meat. One egg, 1/3 cup of nuts, or 2 tablespoons of peanut butter also each count as 1 ounce of meat. Just 2-3 servings from this group are recommended daily!

This discussion would be incomplete without mentioning the dairy category. Two to three servings of dairy are suggested daily. One serving of cheddar cheese is about the size of a pair of dice (1 ½ ounces). One cup of milk or yogurt (8 ounces) also counts as a serving.

Finally, an easy way to remember the tip of the Pyramid and our consumption of fats and sweets is to visualize a thumb-sized portion of oil or butter and to limit our intake of empty sugar calories.

Implications for educators: We should be more aware of the portions we consume. Recent studies show that individuals lose weight and keep it off while recording food intake. Knowing serving sizes simplifies completing a food diary. Knowing how much we eat in terms of servings from the Food Guide Pyramid helps us limit what we eat! When demonstrating portion sizes to clients, food models and real foods can be more effective than using objects. This approach may be especially important with the elderly. However, using objects the target group recognizes will generally help build rapport and lead to a fruitful discussion!

References Used:

http://www.nal.usda.gov/fnic/Fpyr/pyramid.html

http://www.mayoclinic.com

http://www.cnn.com/HEALTH/

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New DRIs for Water and Electrolytes

A new Dietary Reference Intake (DRI) report was released on February 11, 2004 by the National Academy of Sciences/Institute of Medicine. This report contains recommendations for water, potassium, sodium and other electrolytes. This is the latest in a series of reports that are gradually replacing the older "Recommended Dietary Allowances" (RDAs) as the best scientific information on nutrient needs for the U.S. and Canada.

The new DRI report dispels some common myths. For example, people don't need to count glasses of plain water – adequate water can be obtained from juice, milk, coffee, tea, soda, fruits, vegetables and other foods/beverages. Consuming beverages with your meals and additional beverages according to your thirst is all that most people need to keep their bodies hydrated, even when some of their beverages contain caffeine.

The report criticizes the typical Western diet for having too much salt and too little potassium. This contributes to high blood pressure, kidney stones and possibly bone loss. In very simple food terms, that means most Americans use too much salt at the table, eat too many processed foods, and don't eat enough fruits and vegetables. You may be surprised to learn how low the specific DRI recommendations are for sodium and how high they are for potassium.

The DRI report establishes a tolerable upper intake level (UL)* of 2.3 grams of sodium for adults. This is 2300 milligrams, which is very close to the Daily Value of 2400 milligrams on food labels – approximately the amount in a teaspoon of salt. According to NHANESIII data cited in the report (page S-16), more than 95% of American men and 75% of women regularly consume more than the UL for sodium. African Americans and people with high blood pressure, diabetes, or chronic kidney disease may need to keep their sodium intakes even lower than the UL – and increase their intakes of potassium (see below).

The Adequate Intake (AI) estimates the basic amount needed to sustain health. A young adult's AI for sodium is 1500 milligrams, roughly the amount of sodium in 2/3 teaspoon of salt. The AI for sodium is only 1300 milligrams per day for men and women ages 50-70 and 1200 milligrams for people 71 years and older.

The DRI report recommends a diet higher in potassium than most Americans currently get from their diets. To get the AI of 4700 mg per day you'd need to eat lots and lots of fruits and vegetables -- about 10 servings a day, depending on your choices.

Implications for educators. DRIs provide valuable summaries of people's needs for individual nutrients, based on the latest research. However, most Extension nutrition education messages are stated in terms of food intake patterns as summarized in the *Dietary Guidelines for Americans* rather than specific nutrient levels in the DRI reports. The Dietary Guidelines Advisory Committee is a national panel of experts that is currently preparing its recommendations for the next edition which is due in 2005. They are considering this new set of DRIs, DRIs for other nutrients, and other relevant nutrition research, as well as the practical concerns of educators, food manufacturers, and other stakeholders. By the end of next year, the 6th edition of the *Dietary Guidelines for Americans* will integrate all this information to give us up-to-date advice on how healthy Americans over age 2 can make food and beverage choices to build healthful eating patterns and take action for good health.

*UL = Tolerable Upper Intake Level = the maximum level of daily nutrient intake that is unlikely to pose health risks to almost all of the individuals in an age/gender group. Note that neither AIs nor ULs are the same as RDAs.

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The press release on water and electrolyte DRIs is online at

http://www4.nationalacademies.org/news.nsf/isbn/0309091691?OpenDocument. The summary chapter on Dietary Reference Intakes for Water, Potassium, Sodium, Chloride, and Sulfate is available on the Internet in the form of a pre-publication document at http://books.nap.edu/books/0309091691/html/1.html. You can access the full report (over 400 pages) from either of those websites.

For more information, the American Dietetic Association has a fact sheet on salt and hypertension online at: http://www.eatright.org/Public/NutritionInformation/92_11840.cfm

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