



Consumer Focus

► by Rosalie Marion Bliss

Databases provide nutrient information

More than 90% of folks in the United States get inadequate amounts of vitamin E from their diets, according to the U.S. Department of Agriculture (USDA) Agricultural Research Service (ARS). We know this because surveyors query people about what they've eaten, and then other research nutritionists translate "foods eaten" into "nutrients consumed." But how do nutritionists calculate the individual vitamins and minerals people get based on a list of foods and drinks they reported having eaten?

Database

It comes down to researchers who work hard at knowing just what's in the foods, beverages and dietary supplements people consume. The ARS Nutrient Data Laboratory (NDL) (www.ars.usda.gov/nutrientdata) develops specialized databases, available to the public, that provide nutrient information on both single- and multi-ingredient foods. The laboratory is located at the ARS Beltsville Human Nutrition Research Center in Maryland.

Table 1 shows the nutrient profile for a broiled Choice, T-bone steak trimmed of all visible exterior fat. Several variations are available to accommodate different grade levels, fat trim, serving size and cooking method.

At the heart of programs to determine a comprehensive suite of nutrients in U.S. foods and supplements is the National Food and Nutrient Analysis Program (NFNAP). "This year marks the 10th anniversary of this valuable partnership," NDL head Joanne Holden says.

NDL researchers work under an interagency agreement with other groups within the Bethesda, Md.-based National Institutes of Health (NIH). Through these collaborations, food-nutrient data is generated and updated on a regular basis.

"The data is used for a variety of national, regional and local health-monitoring assessments, programs and studies — as well as by the general public," NDL nutritionist David Haytowitz says. He

and nutritionist Pamela Pehrsson oversee the lab's role in NFNAP.

A wide variety of food components are analyzed by commercial laboratories contracted by the USDA and by cooperators at various universities. One of these is the USDA Jean Mayer Human Nutrition Research Center on Aging at Tufts University in Boston, Mass. Using food samples collected through NFNAP, the Vitamin K Laboratory there has been analyzing the amount of vitamin K in a variety of foods and providing that data for use in NDL's compilations.

One of NDL's many new projects is an original Dietary Supplement Ingredients Database. Working with NIH's Office of Dietary Supplements, the lab is developing the ingredients database as a complement to ARS's National Nutrient Database for Standard Reference — a compilation of nutrients found in food products. The results of this work will eventually help nutritionists obtain more-accurate dietary survey results based on the foods people eat and their dietary supplement intake.

"A key focus of the dietary supplement project is to verify — through laboratory analysis — the quantity of stated nutrients and other bioactive components in various dietary supplements," says nutritionist Janet Roseland, who heads that project at NDL.

Other current projects include a database of the vitamin D content in certain foods, new and updated levels of trans fatty acids in a variety of foods, and new data on additional foods typically consumed by ethnic groups.



Editor's Note: This research is part of *Human Nutrition*, an ARS national program (#107) described on the web at www.nps.ars.usda.gov. This article first appeared as "Better Living Through In-Depth Food Analysis" in the August 2007 issue of *Agricultural Research* magazine. Rosalie Marion Bliss is an ARS information staff member.

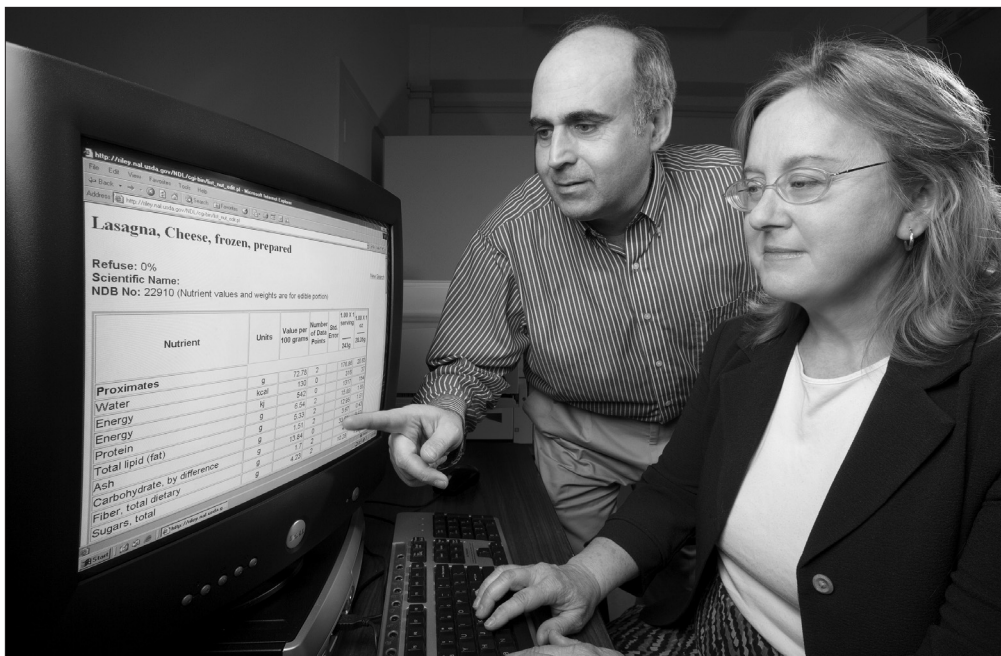


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► Nutritionists David Haytowitz and Pamela Pehrsson use the Nutrient Data Laboratory's online search program to locate the nutrient content of a food item. The online resource is updated with information based on the National Food and Nutrient Analysis Program.