

## HNIS-USDA UPDATE

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### Recent Publications and Publication Plans for 1987

The following publications are now available or are expected to be available this year:

- AH-8-16 Legume Products (published)
- AH-8-15 Finfish and Shellfish Products (in preparation)
- HG-90 Conserving Nutritive Values in Foods (revision in preparation)
- HERR- Sugar Content of Selected Foods (in preparation)
- Provisional Table on Vitamin K (published)
- Provisional Table on Sugars (published)
- Provisional Table on Vitamin D (in preparation)

### Machine Readable Tapes Available through NTIS in 1987

Two tapes have just been submitted to NTIS and should be available for purchase now or in the very near future:

- USDA Nutrient Data Base for Individual Food Intake Surveys, Release 2.1, 1987.
- USDA Nutrient Data Base for Standard Reference, Release 6, 1987.

Both of these tapes are described in Betty Perloff's presentation. Briefly, the first is identical to Release 2 but with additional foods. The second incorporates data for the revised sections on Beverages, Beef Products, and Legume Products.

### Plans for Future Publications

The following Agriculture Handbook publications are expected to be released in the approximate order shown, beginning early in 1988:

- AH-8-21 Fast Foods
- AH-8-17 Lamb, Veal, and Game
- AH-8-19 Sugars and Sweets
- AH-8-18 Baked Products
- AH-8-20 Cereal Grains, Pastas, Snacks
- AH-8-22 Mixed Dishes
- AH-8-23 Miscellaneous Foods
- AH-102 Food Yields Summarized by Different Stages of Preparation (revision)

Two provisional tables are in the planning stage:

- Provisional Table on Dietary Fiber
- Provisional Table on Selenium

### Data Base Evaluation

In the previous presentation Betty Perloff described the Primary Nutrient Data Set (PDS) and explained that it is linked to the Nutrient Data Base for Individual Intake Surveys through a recipe linking file. The recipe linking system permits conversion of food consumption data into equivalent amounts of PDS components so that the contribution of a given nutrient by a food can be measured and principal sources of each nutrient can be identified. Furthermore, since the sources of all data are coded into the PDS, it is possible to evaluate the data base in terms of those codes for foods that are most important in contributing any given nutrient.

An example of this type of analysis is given below. The food consumption data (4 days) for 1,088 women (weighted) in CSFII 85 were equated to the corresponding intake of items in the PDS, and the percentage contribution of the total intake of each nutrient by each item was

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calculated. The table shows the number of PDS items required to reach 80 percent of total nutrient intake, together with the number of items coded as containing imputed values and the number of items whose values are based on data supported by analyses for label claims.

PDS ITEMS CONTRIBUTING 80% OF TOTAL NUTRIENT INTAKE

<u>Nutrient</u>	<u>No.Items</u>	<u>No.Imputed</u>	<u>No.Label Claim</u>
Protein	150	6	0
Dietary fiber	120	46	0
Fat	107	3	0
Cholesterol	49	4	0
Vitamin B-6	175	23	20
Thiamin	168	5	17
Riboflavin	165	5	15
Niacin	159	9	17
Folacin	129	20	14
Vitamin E	100	50	0
Vitamin A (RE)	60	5	9
Vitamin B-12	58	9	5
Carotene	33	0	0
Iron	217	21	18
Copper	209	30	0
Magnesium	187	27	0
Phosphorus	180	5	0
Zinc	169	20	6
Potassium	159	5	0

The number of items to reach 80 percent is a measure of the distribution of a nutrient among the food items comprising the PDS, while the number of items with imputed values is a measure of data uncertainty.

I have included the number of breakfast cereal items for which data are based on label claims because it is evident that cereals are important sources for some nutrients; however, these data, although based on extensive industry analyses, are calculated to a different basis and do not necessarily represent mean values. In Agriculture Handbook No. 8-8, these label-based data are presented in italics.

At the 10th Nutrient Data Bank Conference in 1985, I presented an analysis of the PDS items that estimated the percentage of analytical data for each nutrient both in the entire database and in those food items of higher nutrient concentration. The results showed the data to be weakest for dietary fiber, folacin, vitamins E, A (RE), B-6, and B-12, zinc, copper, and magnesium. Results of the present study confirm the previous findings, except that data for iron are less reliably known while total vitamin A (RE) is better accounted for in the foods actually consumed.

**Extramural Studies**

An important benefit of the approach used in the above analysis is that now we can systematically identify the individual food items that account for nutrient intake for which additional analytical data are most needed, and we can use this information to set priorities for foods and nutrient studies that will make the greatest improvement in the database. We have been following such a procedure in developing our extramural contracts. In addition to improving the database in terms of nutrients now under study, the procedure has been used as one of the

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steps in establishing the foods to be studied for developing reliable data for selenium.

The most important advance in our extramural studies has been the development of a protocol to provide for the validation of analytical procedures and the use of proper laboratory quality control procedures by a contractor. This development is the result of close cooperation between the staffs of the Nutrient Data Research Branch and of the ARS, Nutrient Composition Laboratory. Some of the aspects of their cooperative efforts will be discussed in more detail by Dr. Beecher in the following presentation.

Use of the PDS and recipe linking system offers distinct opportunities for maintaining and improving the reliability of our nutrient database. We realize that the system's accuracy hinges on the ability of the recipe system to predict the nutrient content of a prepared mixed food. Two extramural studies are underway to measure this ability.

We believe that real progress is being made in our efforts to upgrade and maintain nutrient databases. We welcome your comments and suggestions for further improvement.

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