Research

Arlene Redmond

        I am very new to thinking about sorts of problems that we
have been discussing this morning, and very new to the fields of
nutrition and research. I have been working in my current posi-
tion since December, and have been using the nutrient data base
here at Case Western since January. I would like to tell you
about the research we are doing at the Weight Control Unit, our
Nutrient Data Base, and some of my reactions to the conference
this morning.

        The Weight Control Unit is the clinical arm of the Obesity
Research Center at St. Luke's Hospital. Our orientation is to
look at what our patients are eating, and at what they have been
eating, and to assess how diet affects their health, ability to
lose weight, weight history, body composition, blood chemistry,
and cell morphology. We have been analyzing three day food
records kept during their first week at the WCU. We request that
patients maintain their usual eating habits for this week.
Later, we analyze three day food records at 8 months in treat-
ment, 16 months, and 24 months. We also test body composition,
blood chemistry and several of the studies that we did origi-
nally. We are looking for correlations among biochemical, phy-
siological, and behavior measures, and also, correlations between
these measures and food intake. For example, there may be an
association of caloric level with liver enzymes or thyroid hor-
mones, or fat intake and blood lipids.

        One specific protocol that we are doing is a fiber study.
Patients are put on 10 weeks of a high fiber diet, followed by 10
weeks of an isocaloric diet. We are using the nutrient data bank
to ascertain base-line fiber intakes, and fiber intake at the
different levels of fiber specified by the protocol. A more com-
plete fiber breakdown in the nutrient data bank would be a useful
improvement.

        The views that were discussed this morning about the accu-
racy and reliability of data bases are very much of concern to
us. Making bio-chemical conclusions about how various intakes
affect liver enzymes, for instance, is a difficult thing to do in
view of all the uncertainties that were noted this morning. The
best we can do is to look for general correlations first, and
then later to do a more controlled study to assess trends which
we preliminarily find. The addit onal errors which we face are

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those of patient recording. It has been noted for years that obese patients are not always 100% accurate with their food records. We do encourage our patients to be as accurate as possible. It is also very much of concern to us to know where the data base is complete and where it is incomplete. Even if a ball park estimate could be made for the percentage of missing data for a particular nutrient, we would know how good the data was upon which we based our conclusions.

One special area we are interested in looking at is meal patterning, the time of eating, place of eating, physical position while eating , mood while eating, degree of hunger, and possibly one or two other things. Accordingly, we would like to see this type of information programmed into a data base. Another problem is speed in receiving analyzed records. The process may be speeded up by a telephone hook-up or by a purchase of tapes from Case Western or some place else. As Ms. Uhrich said this morning, however, it's probably easier to leave the computer program in someone else's hands.

Another concern that we had was discussed this morning; that was the quality of information from food companies. If package size information is not complete, then we will be unable to accurately interpret what the patients have recorded for us. Finally, several uses of a nutrient data base which were mentioned this morning are very exciting possibilities. Nutrient density, and specifically calorie density would be useful for us to use in both research and patient education. Analysis of favorite foods for cholesterol, calorie density, saturated fat, sugars, and other nutrients would be particularly helpful in patient education.