

DRI Update

by Barbara Wakeen, MA, RD, LD, CCFP

As promised, from the last Dietitian's Corner, I would share any updates from the American Dietetic Association (ADA) and any other authorities related to the DRIs. Unfortunately, what we were all hoping for was a 'black and white' answer to our dilemma regarding the nutrient values to confirm our menu approvals, *but there doesn't seem to be one!* I did receive a wealth of information from some of the top authorities on this subject as referenced below.

As a refresher, there has been ongoing discussion among the corrections' RDs on how to meet some of the latest Dietary Reference Intake (DRI) values for nutrients for our controlled populations. We all are familiar with the nationally recognized standards referencing the meting the "dietary allowances."

Historically, most corrections RDs used the Recommended Dietary Allowances (RDAs) for a given gender and age group as a standard of comparison to validate menus. RDA is the average daily dietary intake level that is *sufficient to meet the nutrient requirement* of near-

ly all (97 to 98 percent) healthy individuals in a particular life stage and gender group.

Most recently, the DRIs were established of which the RDA's are a part as addressed in the previous article [DRIs include RDA, Estimated Average Requirement (EAR), Adequate Intake (AI) and Upper Limits (UL)]. Since we now have even more nutrient goals within the DRIs, we have been aiming to achieve them in various ways. Note: *The DRI focuses on prevention of nutritional deficiencies and disease.*

Recent responses from ADA and other DRI authorities has concurred that the RDA is not for use with populations. Does this mean the 'nationally recognized standards' we have been using as a standard of comparison are in error... Not exactly.

As stated in the Institute of Medicine's (IOM) **Dietary Reference Intakes**, Applications in Dietary Assessment (2000), "...when requirements in the population are distributed as normal random variables, the RDA exceeds the requirement of more than 97 percent of all individuals in the group."

Esther F. Myers, PhD, RD, FADA, Director, Scientific Affairs and Research at ADA provided selected pages from **Excerpts from 2009 Second Edition of international Dietetics & Nutrition Terminology (IDNT) Reference Manual.**

Upon review of the information, I selected these points that helped clarify usage of these reference values:

Addition of interpretive information for the Dietary Reference Intakes (DRIs) (page 18): The DRIs are one reference standard that dietetics professionals can use for comparison of estimated intake. Since all DRIs are for healthy individuals in a particular life stage and gender group, they may not be applicable standards for all clinical scenarios.

DRI Assessing the Intake of a group (page 36):

- **RDA**—Do not use to assess intakes of groups.
- **EAR**—For nutrients with an EAR, use the EAR to assess the prevalence of inadequate intakes or the proportion of a population that has estimated usual intakes below median requirements. Choose between two methods: the probability approach or the EAR cut-point method.
- **AI**—For nutrients with an AI, estimated mean intakes at or above this level implies a low prevalence of inadequate intakes. However, when estimated mean intakes of groups are below the AI, it is not possible to make any assumptions about the prevalence of inadequacy.
- **UL**—For nutrients with a UL, estimated usual intakes above the UL are used to estimate the percentage of the population at risk of adverse effects from excessive nutrient intake.

In addition, Dr. Myers offered... "It isn't as simple as saying a given percent for all nutrients for all populations...it really has to be tailored." The steps are outlined as follows:

- Determine an acceptable low prevalence of inadequacy (using your clinical judgment about what nutrients are of most concern and what is an acceptable potential prevalence of inadequacy).

- Determine target usual nutrient intake distribution (based on the nutrient curve for that specific nutrient).
- Select a Summary Measure of the Target Usual Nutrient Intake Distribution to Use in Planning (perhaps based on the median intake from menu analysis or a range determined based on clinical judgment).
- Evaluate your menu based on actual intake data.

Suzanne Murphy, PhD, RD, a leading DRI authority, has provided commentary and guidance. Dr. Murphy was the chair of the committee that wrote the DRI report on "Applications in Dietary Assessment," and a member of the committee that wrote "Applications in Dietary Planning." She is also a member of the Food and Nutrition Board of the Institute of Medicine (IOM), which is responsible for setting and updating the DRIs.

First, a comment on terminology: DRI is a general term for a collection of nutrient standards (it refers to the EAR, RDA, AI, and UL). It's confusing when the RDs on the listserv talk about using "the DRI" as a standard—it's important to specify *which* DRI is meant.

The many reports and papers that have been published carefully distinguish between using nutrient standards for *individuals* and for *groups*. Planning menus for groups of people

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has a specific recommended methodology, (as Esther Myers noted above). The basic idea is to make sure that most people have an adequate nutrient intake, which does involve thinking about the distribution of intakes.

Specifics:

- Neither the EAR nor the RDA is an appropriate nutrient standard when planning for groups; a percent of the RDA is also not an appropriate standard.
- Ideally, one would design a nutrient intake distribution so that very few people have inadequate intakes. The median of that intake distribution would be the nutrient standard that is used for menu planning. This number is sometimes called the target median intake (TMI). It is almost always a higher number than the RDA! By using the RDA or the EAR as the target, a high proportion of the group is almost guaranteed to have inadequate intakes (about 50% with the EAR and about 30% with the RDA). This is clearly not desirable!
- The AI is an appropriate nutrient standard when planning for groups.
- The UL is also an appropriate standard for groups; ideally, no one's intake should exceed the UL. With supplements and fortified foods, this can easily happen.

Suggestions:

- Ask the small group of corrections RDs to estimate TMIs to be used in various settings, so that everyone can use these numbers. (TMI is defined as the median of the target usual intake distribution.)
- Consider menu planning using a food guide such as MyPyramid. This has several advantages, one being that it's not necessary to be concerned about nutrient intake distributions. Although MyPyramid was designed for individuals, it seems to work for group planning as well.

Several of these issues were addressed in a recent report from the Institute of Medicine: "Nutrition Standards and Meal Requirements for National School Lunch and Breakfast Programs: Phase I. Proposed Approach for Recommending Revisions." It's available at www.nap.edu.

Diane Wickstrom, MS, RD and Joan Schwaba, MS, RD, Managers, Governance at ADA, informed met that the ADA Positions Committee (APC) is in the review process of a concept proposal for a Practice Paper to be written on the DRIs. More information on the status of this proposal will be available later in February.

These don't sound like the answers we were hoping to hear. We are all used to following a standard of reference, not making determinations on acceptable inadequacies. 'Tailoring' these nutrient goals for our populations will no doubt prompt further discussion amongst our group. Based on our audience, and the standards referencing the 'dietary allowances,' we will be revisiting this topic again soon. A small group of corrections RDs has formed to address these terms and values as they are referenced in nationally recognized accreditation standards such as ACA and NCCHC and many state standards as well.

Current practices of nutrient values referenced are varying from within our group of corrections dietitians. A recent query of the corrections listservs resulted as:

- Meeting the 100% DRIs or being very close.
- Using the DRIs and trying to meet 100%.
- Using a combination of the DRIs, such as the RDA for some nutrients combined with the EARs.
- Meeting the DRI or EAR.
- Aiming to achieve 100% of the DRI-RDA and AI, and then comparing those less than 100% to the EAR.
- Referencing the DRI and RDA for select nutrients.

Look for more updates on this topic in future editions.

Meetings and Announcements

NCCHC Updates in Correctional Health Care

April 4-7, 2009

Las Vegas, NV

For more information visit www.ncchc.org

Membership Information

If you would like to be added to the Dietitians in Corrections networking EML (electronic mailing list), please email me directly at bwakeen@neo.rr.com. This is an informal discussion group and your name/email address will be listed in each email sent to the group.

If you are interested in joining the Corrections Sub-unit or if you are already a member and want to subscribe the Corrections Sub-unit EML or be listed in the directory, visit the CD-HCF website at www.cd-hcf.org. Emails communicated through this group sent through a private email address.