

Fortified Beverages - Are Alternates Becoming the Norm?

By Barbara Wakeen, MA, RD, LD, CCFP, CCHP

We all abide by governing agency and accreditation standards and guidelines to meet nutritional requirements for overall menus, nutrients and meal patterns, such as the USDA Dietary Guidelines, MyPlate, ICE Detention Standards, ACA and NCCHC Standards, State Standards and more. In addition, we are challenged with rising food costs and are all asked to be as creative as we can in meeting the standards while maintaining budgetary goals. This is not a new scenario; we are just having to be *more creative more* frequently. Items such as beans (one of my favorites for cost and nutrients), which have been predominantly cheap, are now more costly than ever. Milk and other beverage costs are evaluated with regularity for the best fiscal and nutritional balance. Making alterations to achieve budgets requires attention to portions, nutrients, opportunity buys and feasibility within facilities.

The extension of the Farm Bill has at least quelled projected increases in the already high price of milk for now. Many of us have been addressing the cost of milk (and food in general) by offering a variety of milk types, quantities and alternates to milk that offer the same nutrients. A recent query on milk and beverage usage has resulted in *much varied* offerings of milk, milk replacers and fortified beverages (note: a respondent may be representative of more than one facility such as a prison system) as follows:

Type of Milk

- Ranges are mostly skim, 1% and 2%.
- One respondent has switched to whole milk as it was less expensive.
- Some have the opportunity to use reconstituted non-fat dry milk for drinking.
- One produces milk in own dairy modified low fat and modified chocolate (skim and 1% also for youth).

Quantity

- Most offer ½ pint cartons.
- Self-serve/free pour mostly in prisons for main population. Equal measures per menus are offered to those in segregation and others who don't come to the dining hall.

Frequency

- Most commonly, milk is served 1 – 2x daily - at breakfast and/or lunch/dinner; some of these are unlimited/self-serve at meals and some are in cartons.
- Less common is 3x daily, per two respondents.

Continued on Page 9

- Some offer as little as 2 – 4x/ week depending on the type of cereal and/or meal. Milk alternates that contain nutrients and/or calories similar to milk are offered on other days.
- Gender and population differences - differentiate between males (2 @ breakfast), females and adolescents (1 per meal).
- Additional 8 oz milk for adolescents and pregnant/lactating females.
- Two respondents offer no milk to main populations, only milk alternatives that contain nutrients and/or calories similar to milk (Calcium and Vitamin D). One notes that diabetics and youth receive milk. The other offers milk only to youth in the Child Nutrition program.

Other Notations

- Females receive fortified milk alternative at dinner in place of milk.
- Milk alternative for large population that are **lactose intolerant**.

- Using fortified beverages **in place of soda** (for nutrition) and fortified (fruit flavored) milk alternate **in place of soy for vegans (for cost)**.
- Milk replacement (fruit flavored) at dinner in **packets**.
- **In addition to milk**, offer sugar-free punch type beverage at lunch and supper. Approximately 1/3 of population selects the sugar-free punch type beverage in place of milk.
- **Vitamin D fortified beverage** at lunch and dinner.
- **Milk contains more protein and calcium** than milk outside of state. Third beverage serving is milk alternate w/Vitamin A, C and D to **meet state requirement**.
- Milk alternate bears **slightly sweet taste**.
- Milk twice daily for **diabetics**. Vitamin fortified beverage for **added Calcium and Vitamin D**. **Soy beverage for vegans** at each meal for added protein, Calcium and Vitamin D. **Rice milk for allergy diets** daily.

Continued on Page 10

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- **Soy milk (dry pkts)** for **lactose restricted** and **vegan** diets. Calcium fortified beverage at lunch and dinner.
- **Fortified beverage** at lunch and **homemade sweet tea with sugar** at dinner.
- Fortified beverages for lunch and dinner.
- **Sugar-free punch** at lunch all in **sealed bags**. Considering a change to fortified beverage in **packs** for lunch and dinner.
- Fortified beverage at lunch and dinner with **7 vitamins and minerals**.
- **Sugar-free drink mix** sent in **bulk** for distribution at lunch, and fortified drink mix packets at dinner. **Switched from lactose free milk** to fortified milk replacer,
- **Coffee** daily at breakfast and 2 x/day and Vitamin C fortified drink at lunch.
- White milk on all days except Tuesday and Saturday breakfast we serve **chocolate milk**.
- **Religious** diets receive one ½ pint of milk at breakfast and provide a milk alternative at the other 2 meals because the alternative is cheaper and **kosher certified**.
- Well received to the point some would **claim lactose free to get milk alternate**.

From the above contributions, one can see the beverages offered that aren't milk are of multiple varieties and nutrients to meet varying nutritional needs and requirements. All appear to be well received by populations.

Milk Alternates

There are two types of milk alternates in general; one that can be used as a milk replacer that bears the physical characteristics of milk, and one that is a fortified punch type beverage. The former is even available in vegan and lactose free varieties and the latter is available in varying flavors, including tea. The punch is even offered as a clear beverage. Both contain similar desired nutrients of milk – Calcium and Vitamin D (and more), are mixed with water and served in place of milk in varying degrees - to meet nutritional needs for their populations based on *their* menus and regulations.

Milk alternates vary in calories and nutrients, including protein. Most from 1.5 to approximately to 100 calories/8oz serving. In comparison, 1 cup skim milk contains approximately 90 calo-

ries, 1% milk contains approximately 102 and 2% contains approximately 130 calories. The most common nutrients in varying quantities are Calcium, Vitamin D, Vitamin A and Vitamin C. Products with additional nutrients provide Zinc, Vitamin E, B-12 and Potassium. Protein content varies from zero to approximately 4 grams, but can be manufactured to any reasonable desired amount. These are available in packets or bulk, reconstituted and served.

Nutritional Content

The nutritional content of the fortified beverages in general contain as little as one vitamin, usually Vitamin C (usually needed when limited fruit/juice is offered). Milk alternates aim to contain at least Calcium and/or Vitamin D, to as much as Zinc, Vitamin A, Vitamin C, Vitamin E, B-12 and Potassium, and any combination thereof. Even with this variety, the amount of the nutrients varies per manufacturer offering or governing agency specs. Some are lactose free and some not. Some look like milk and others like punch. Some are sugar-free and some contain a higher caloric content. The sugar-free beverages are simpler to serve to entire populations so as to not differentiate for most medical diets (diabetics in particular). In addition to these nutrients, some contain protein as well; these tend to be at the higher end of the cost scale.

Rationale

Many noted the use of milk alternates and fortified beverages for cost savings, but also to meet nutritional requirements for hard to achieve nutrients such as Vitamin D, Potassium and more. One noted an upgrade in nutrition from soda! In terms of nutrition the goal is to get added nutrients most cost effectively.

Special Populations

Those with altered nutrient needs such as youth/adolescents, females and pregnant/lactating females also were recognized to receive milk with increased frequency. Where there is a medical need, such as allergy or intolerance, these alternates to milk are offered as well. In addition, for dairy and lactose concerns, or lifestyle choices, some offer soy milk, soy beverage, rice milk and the B-12 fortification.

Continued on Page 11

Packaging

Most expressed using dry product for the milk alternate, versus a liquid. There are benefits to both, but storage and delivery are two big benefits for the dry. Also, some nutrients don't dissolve well in a liquid concentrate and are a high consideration for nutrient fortification. Respondents referenced cartons, free-pour, pre-poured, packets and sealed bags/pouches for all the beverages noted.

Cost Savings

We all know the savings varies per quantity purchased. One noted an expected savings of \$12 – 14,000 per year. Another noted an 11 cents per meal savings per inmate.

As you can see, beverage usage is as varied as our menus and nutritional requirements. As dietitians, we all want to provide real food to meet nutritional needs and agency requirements, but with the constraints we face from the varying entities, sometime we have to seek out other means to get our goals accomplished. ACFSA is fortunate to have vendor partners who go above and beyond to meet the needs of our environment by manufacturing/offering directly and indirectly the products as listed above. Check the ACFSA web site www.acfsa.org for vendors who offer these beverages as well as attend ACFSA conferences where there are many products displayed.

I would like to thank everyone who participated in this brief survey enabling me to share this article with you.

Notable News

The **Academy of Nutrition & Dietetics** membership renewal is active if you aren't a member or haven't already renewed. www.eatright.org. Being an Academy member offers benefits of joining Dietetic Practice Groups (DPGs) such as Dietetics in Health Care Communities (DHCC), home to the DHCC Corrections Sub-unit. Visit the DHCC website www.dhccdp.org for sub-unit information and for all the benefits offered, including webinars and newsletters (both providing CPEUs), networking and reference publications.

Speaking of publications, **The Nutrition and Food Service Management in Correctional Facilities Manual, 3rd Edition** with addendum is available for purchase. This is the manual ACFSA has made available at the International Conferences in the past few years. This manual can be purchased via the DHCC web site at www.dhccdp.org and **The Academy of Nutrition and Dietetics** web site www.eatright.org.

DHCC will be updating this manual and is looking for RD reviewers/contributors. If you are interested, please contact Marlene Tutt at lenetutt@yahoo.com or me bwakeen@neo.rr.com.

DHCC debuted the **Emergency Management for the Healthcare Professional** in October 2012. This DOWNLOADABLE publication was developed to provide guidance in assisting facilities develop an emergency management plan. If you haven't seen it or don't already own it, check it out on the DHCC website at the DHCC Online Store - Food Service. It has more than 400 pages! www.dhccdp.org or www.eatright.org

Conferences

NCCHC

National Conference on Correctional Health Care
April 20 – 23, 2013

Denver, CO

www.ncchc.org

Membership Information

If you would like to be added to the Dietitians in Corrections networking listserv, 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. *You do not have to be a dietitian to be on the list.*

If you are interested in joining the DHCC Corrections Sub-unit or if you are already a member and want to subscribe the DHCC EML or be listed in the directory, visit the DHCC web site at www.dhccdp.org or contact Marlene Tutt at lenetutt@yahoo.com. Emails communicated through this group are sent through a private email address.