



Nutrition for Family Living

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October, 2008 Topics

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Energy Drinks, Sports Drinks, And Other Functional/Enhanced Beverages Are Often A Waste Of Money

By Sarah Jacquart and Susan Nitzke, reviewed by Dr. Frank Greer

Energy drinks are the fastest growing beverage category in the United States and have quickly become a popular drink option for young adults. Many of these drinks claim to increase stamina, mental, and athletic performance, as well as provide the consumer with health benefits such as heart health, joint health, satiety, and energy-boosts.

The American Dietetic Association refers to energy and vitamin drinks that have been enhanced with added ingredients to provide specific health benefits beyond general nutrition as functional beverages. These drinks often contain such ingredients as caffeine, green tea, vitamin C, ginger, cranberry extract, and various herbs such as yerba maté, schizandra, acai, and ginkgo biloba. Popular energy drinks contain taurine, glucuronolactone, caffeine, and/or B vitamins. Also increasing in popularity are enhanced/fortified waters, which have various formulations that proclaim one health benefit or another and ranging from endurance and energy to defense and relaxation. However, these promises for increased health are often highly exaggerated and backed by weak research or none at all.

Concern about the possible negative effects of functional beverages has been gaining momentum, in particular, regarding the high levels of caffeine in some of the energy-boosting drinks. A recent study in the *Journal of Analytical Toxicity* (2006) examined the caffeine levels of ten brands of energy drinks and found levels ranging from 0-141 mg/serving. The recommended amount of caffeine consumption is 300 mg/day or less. This means that moderate consumption of energy drinks should not have adverse effects on health because of the caffeine levels, but excess consumption could have negative consequences including increased heart rate, nausea, restlessness, anxiety, and tremors.

Additionally, most healthy people do not benefit from the low levels of nutrients found in many of the popular functional drinks. For the potential health benefits, nutrient-dense foods such as fruits, vegetables, fat-free/low-fat milk, and whole-grains are more effective sources. Some varieties of functional drinks contain high levels of ingredients that have not been tested for safety, interactions, long-term consequences, and optimal doses. These beverages are relatively expensive and many have significant calorie levels, some containing over 200 calories per serving



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and may contribute to the obesity problem. It is important for consumers to be aware of what they are drinking by reading nutrition labels and paying attention to sugar and calorie amounts.

Examples of Beverage Costs in 2008*			
Product	Size	Cost/container	Cost/12 oz.
Tap Water	n/a	\$0.00	\$0.00
Bottled Water	20 oz.	\$1.29	\$0.77
Soda ¹	20 oz.	\$1.39	\$0.83
Vitamin Water® and Gatorade®	20 oz.	\$1.49	\$0.89
Orange Juice	12 oz.	\$1.70	\$1.70
Energy Drink ¹	16-17oz.	\$2.69-\$3.79	\$2.02 - \$2.68

*Single containers at Walgreen's, September 12, 2008, Lake Mills, WI
(Tax not included).

¹Coca Cola® and Pepsi® were used as examples of soda;

Rock Star® Full Throttle® and Red Bull® were used as examples of energy drinks

Implications for Extension Educators: Based on advertising claims for energy drinks and other functional/enhanced beverage products, consumers may feel that these products are necessary for good health. In most situations, these products represent unnecessary expenses and have no clear nutritional advantage over plain water.

References:

Dyuff, Roberta Larson. American Dietetic Association Complete Food and Nutrition Guide. 3rd ed. Hoboken, NJ: John Wiley & Sons, Inc., 2006.

“Energy Drinks: The Fads and the Facts.” Food Insight Newsletter, January/February 2008.

<http://www.ific.org/foodinsight/2008/jf/energydrinksfi108.cfm>

Palmer, Sharon. “Functional Beverages.” American Dietetic Association, February 2008.

http://www.eatright.org/cps/rde/xchg/ada/hs.xsl/nutrition_16066_ENU_HTML.htm

Related resource:

As part of the WI Nutrition Education Network's 2006 statewide campaign, Stepping up to a Healthy Lifestyle, Betsy Kelley developed a display with activity suggestions to help people make good decisions when they make their beverage choices. See “What’s in Your Drink?” (<http://www.nutrisci.wisc.edu/UWextension/nutrinet/ndrink.html>).



Two Studies Of Nutrition Education By Phone

By Susan Nitzke

A group of researchers and Extension/outreach educators from ten states including Wisconsin recently conducted a study using a combination of mailed materials and educational phone calls to encourage young adults (18-24 years old, mostly lower income and non-college women) to eat more fruits and vegetables on a daily basis. The content and strategies of the intervention were based on the transtheoretical model (stages of change) and motivational interviewing. The educational calls component of the intervention was evaluated by tracking expenditures, surveying educators who originated the calls, and surveying a sample of the young adult participants.

Many of the participants were only reachable via cell phones during evening hours and phone contacts often required several repeated attempts. Educators rated participants' receptiveness in nearly equal categories of concise and businesslike (34%), enthusiastic and engaged (31%) and hurried and distracted (31%). Two thirds of the educators rated the use of telephones for education as somewhat practical, 14% said it was not practical and 19% gave it a rating of quite or very practical. On average, it cost about \$6 to complete an educational call. Cost was primarily educator's time to reach and speak to the learner. Participants tended to favor the intervention's colorful and attractively designed print materials* by giving them higher ratings than the educational calls. In fact, only 6% gave the calls a higher ranking than the print materials as their preferred mode of education.

Another recent study of phone contacts involved a more intensive counseling mode that was evaluated with data from 95 volunteers in California. The participants in Newman's study were older than the subjects in the F&V Connections study (21-84 vs 18-14, respectively). Their participants completed baseline and 6-month dietary assessments and a counseling intervention with 8, 25-30 minute calls over a 3-month period. The calls were based on Social Cognitive Theory. The Newman study reported success in dietary improvements including greater intakes of vegetables, fruits, whole grains, and beans, and their findings were validated by increases in blood levels of carotenoids (biomarkers for fruit and vegetable intakes).

Implications for Extension Educators:

Although Newman's study involved counseling which is beyond the scope of most nutrition education programs, both these studies showed that educational phone calls have potential value for helping people learn and apply nutrition concepts to their daily lives. Over the years, Extension educators in Wisconsin have found educational calls useful, especially in situations where travel is difficult, such as reaching older adults in rural areas during bad weather. Educational calls may be most useful when they reinforce messages that were delivered by more personally engaging means such as face-to-face teaching or individualized mailed materials. Techniques such as stage-tailoring and using principles of Social Cognitive Theory or Motivational Interviewing can be useful in making educational calls more learner centered. However, limitations and barriers must be anticipated, including difficulties in establishing contact during normal business hours and the challenge of maintaining interest when it is not possible to use engaging techniques such as demonstrations and hands-on practice.



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References:

Esters ON, Boeckner LS, Hubert M, Horacek T, Kritsch KR, Oakland MJ, Lohse B, Greene G, Nitzke S. Educator and participant perceptions and cost analysis of stage-tailored educational telephone calls. *J Nutr Educ Behav* 2008;40:258-264.

Newman VA, Flatt SW, Pierce JP. Telephone counseling promotes dietary change in healthy adults: Results of a pilot trial. *J Am Diet Assoc.* 2008;108:1350-1354.

**Print materials from this intervention (magazine-style overview and a series of 4 stage-tailored newsletters on fruits and 4 on vegetables) are available in English and Spanish, upon request while supplies last. Email requests to Kelley@nutrisci.wisc.edu. The educational messages are also accessible via a stage-tailored website in English and (soon) Spanish: www.nutrisci.wisc.edu/fav.*



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Heads Up Information for the Community-Academic Partnership Fund and Obesity/Healthy Weight Coalitions

By Nancy Crevier and Gayle Coleman

Several items have come to our attention lately that may be of interest to Extension colleagues working with partners on health issues in their communities. We wanted to give you a heads-up on these items in case you were not aware of them, particularly if they apply to your county.

- The Community-Academic Partnership Fund is a component of *The Wisconsin Partnership Program*, a five-year plan created by the UW School of Medicine and Public Health Oversight and Advisory Committee to guide the distribution of funds from the conversion of Blue Cross/Blue Shield United of Wisconsin. It is based on the premise that partnerships capitalize on the strengths and unique skills of community-based organizations and the UW School of Medicine and Public Health faculty and staff. The Partnership Fund provides grants to community-based organizations to improve the health of the public through an annual Request for Partnerships. Eligible community partners are private non-profit or public organizations, such as state and local governments, voluntary associations, foundations, civic groups, schools, universities, religious organizations, healthcare organizations and Indian tribal organizations. This year, the Partnership Fund has extended an offer to submit full proposals to over 100 potential applicants who submitted letters of intent. Many of these abstracts describe projects that may involve or be of interest to FLP Educators such as community coalition work related to obesity prevention. Abstracts for these projects can be accessed at http://wphf.med.wisc.edu/how_to_apply/proposals.php?int_id=1515. To access an abstract, click on the title. Then click on “proposal abstract.” Full proposals were due August 29, 2008.
- Recently, the Department of Health Services surveyed Obesity/Healthy Weight Coalitions in Wisconsin. Of the counties that responded to the survey, 28 counties indicated that UW-Extension was represented on their coalition. These counties were Barron, Brown, Buffalo, Burnett, Clark, Dane, Douglas, Eau Claire, Green Lake, LaCrosse, Langlade, Lincoln, Manitowoc, Marinette, Marathon, Milwaukee, Oneida, Outagamie, Pepin, Pierce, Polk, Portage, Price, Rock, Sheboygan, Waupaca and Wood. Of the counties that responded to the survey, 10 counties indicated no UW-Extension representation. These counties were Chippewa, Dane, Dodge, Manitowoc, Milwaukee, Racine, Sauk, Washington and Wood. Some counties appeared on both lists but with different coalition names or contact information.
- The Department of Health Services, Wisconsin Physical Activity and Nutrition (WiPAN) will be making grants available to coalitions. These grants may be used for capacity building or implementation of coalition projects. We expect the requests for proposals will be announced early this fall and will let you know about the announcement in case your coalition is interested in applying for one of these grants.



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Technology and Education - FYI

By Gayle Coleman

Several new resources are available to help us think about using technology for Family Living education. They provide a variety of examples of how university faculty and health agencies are using technology to meet the needs of adult learners.

On August 5, 2008 Dr. Curtis Bonk, Professor, Indiana University, visited Wisconsin and did a presentation on blending on-line learning with learner-centered education. Dr. Bonk's presentation included examples of education using video streaming, podcasts, blogs, social networking, and virtual field trips. His presentation is archived and can be viewed at http://www.uwex.edu/ics/bonk_presentation/.

One of the resources that Dr. Bonk mentioned in his presentation was MonkeySee.com. Recently, the International Food Information Council partnered with Dr. Christine Bruhn, Professor, University of California-Davis, to offer "How to Know when your food has gone bad" at the MonkeySee site, <http://www.monkeysee.com/play/7754-how-to-tell-if-your-food-has-gone-bad>. Barb Ingham looked at this presentation and thought it was very well done. Although most MonkeySee presentations are not research based, there are some high-quality presentations.

On August 21, 2008 Michigan WIC presented a 3-hour webcast on WIC Health, internet-based education available to many WIC clients for secondary education. The webcast explained how Prochaska's Transtheoretical Model (Stages of Change) combined with Motivational Negotiation is being used to provide nutrition education using the internet. Rigorous evaluation was not done for this project but data was presented on which WIC clients are using WIC Health, how they are accessing it and what they enjoy about this type of education. Currently 26 Wisconsin communities are using WIC Health with their clients but more may be promoting it in the near future.

This webcast is archived at <http://learning.mihealth.org/mediasite/wichealth/> and will be available free of charge until August 2009. Registered dietitians and nurses can get 3 hours of continuing education by viewing the webcast and completing the evaluation survey.

Although not new, Fruit and Vegetable Express Bites, an interactive, web-based educational intervention conducted by a team lead by Susan Nitzke, continues to be available at <http://www.nutrisci.wisc.edu/UWextension/FAV/index.htm>. This educational resource combines the Transtheoretical Model and Motivational Negotiation to increase fruit and vegetable consumption of young adults. Evaluation of the intervention demonstrated that a stage-tailored web program can significantly impact the mediators (e.g. perceived barriers or benefits) and indicators of dietary change, especially in targeting vegetable intake behavior.

Implications for Extension Educators: These presentations give us a glimpse into how Wisconsin residents may be acquiring information. Although these resources might not be accessible to or ideal for all learners, it appears that even many low-income adults such as WIC clients are using the internet for educational purposes.



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References:

Bonk C. *A Galaxy of Online Learning Style, Motivational, Blended Learning and Learner-Centered Examples*. Presented August 5, 2008.

WIChealth.org web cast. August 21, 2008.

Park A, et. al. *F & V Express Bites: A Stage-Tailored Web Program Aimed to Increase Fruit and Vegetable Intake in Young Adults*. Poster presentation, Society for Nutrition Education annual conference, July 18, 2006.