

Newsletter

September 2007



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From *The Harris Poll*

1983 to 1985

- 59 percent of adults aged 25 and over were overweight.
- 15 percent were obese

2006 to 2007

- 81 percent of adults aged 25 and over were overweight.
- 37 percent who were obese

The Harris Poll[®] asks a cross-section of U.S. adults about some important health risks. In February 2007, the nationwide telephone survey of 1,013 U.S. adults was conducted (2006-2007 results).

Probiotics

Approximately 75 GADA members attended the Fall Kick-off meeting sponsored by Mayfield Dairies: "Probiotics in Dairy Foods: It's a Cultured Thing." Below are some excellent references on probiotics to help expand your current knowledge. Probiotics are a booming business but not all probiotics have the same effect on health and disease. It's important to know the role of the specific species and strains of probiotics to determine their efficacy in the management of health and disease.

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This issue of the GADA Newsletter is devoted to topics in clinical nutrition and medical nutrition therapy. The next issue will focus on Community Nutrition.

If you are interested in submitting an article, please contact Barbara Hopkins at bhopkins@gsu.edu. The deadline for submission is November 26.

Update on Physical Activity Recommendations

The American College of Sports Medicine (ACSM) and the American Heart Association (AHA) have updated their recommendations regarding physical activity for adults, which were last published in 1995. The new guidelines include modified recommendations for older adults. These new guidelines describe the type and amount of exercise necessary to improve and maintain health in healthy adults. The full report can be found in the August issue of *Circulation* [H WL, Lee IM, Pate RR, et al. Physical activity and public health: updated recommendation for adults from the American College of Sports Medicine and the American Heart Association. *Circulation* 2007; 116 :1081-93].

Highlights:

- Moderate-intensity aerobic (endurance) physical activity for 30 minutes or more for 5 days per week or for vigorous-intensity aerobic physical activity for 20 minutes or more for 3 days per week for healthy adults 18 years or older.
- The physical activity requirement can be met through a combination of moderate- and vigorous-intensity activity.
- Periods of 10 minutes or more of moderate-intensity aerobic activity can be accumulated toward the 30-minute minimum.
- Light-intensity activities of daily living do not count toward the requirement of moderate-intensity.
- Every adult should engage in activity that maintains or improves muscular strength and endurance on at least 2 days per week.
- Exceeding the minimum recommended amounts of physical activity may further improve personal fitness, decrease the risk of developing chronic diseases and disabilities, and help prevent unhealthy weight gain.
- The activity plan for older adults should include moderate-intensity aerobic activity, muscle-strengthening activity, decreasing sedentary behavior, and risk management.
- In older adults, activities should promote flexibility and balance exercises in older adults at risk for falls.

Arginine and Head and Neck Cancer Patients Can clinical outcomes be improved using a high-dose of enteral arginine in postsurgical head and neck cancer patients?

There is a high incidence of postoperative complications and wound infections in patients with head and neck cancer. The immune system of these patients is often affected; surgery alone has been found to depress the immune system of these patients. Because malnutrition increases the risk of wound-related complications and dietary interventions can improve or accelerate the wound healing response, nutrition therapy has been found to help wound healing. Past evidence suggests that enteral nutrition supplemented with arginine and dietary fiber can improve immune function and reduce postoperative complications. These studies, however, have not looked at arginine in doses higher than 12 g/day.

In October 2003, a prospective, randomized trial was initiated to investigate whether postoperative nutrition of head and neck cancer patients using a high dose of arginine (17 g/day) could improve nutritional variables as well as clinical outcomes. The study was conducted from October 2003 to December 2005 and included a population of 72 patients with oral and laryngeal cancer.

Participants were randomly allocated to one of two groups at surgery: (a) patients (n=35) received an enteral diet supplemented with arginine; and (b) patients (n=37) received an isocaloric, isonitrogenous enteral formula. Enteral feeding was conducted through a nasogastric tube and commenced within 8-12 hours of surgery. The infusion rate was progressively increased until the daily nutritional goal (32 kcal/kg; 1.7 g protein/kg) was reached. The nutritional goal for arginine (17g/day) was reached on postoperative day 4. Nutritional support was

discontinued when a minimum oral intake of 1500 kcal/day and 1g/kg/day of protein without supplementation was reached.

The duration of enteral nutrition was similar in both groups, with an average duration of 16 ± 9 days. Both groups had similar instances of diarrhea and there were no dropouts due to intolerance. Complications related to postoperative infections were similar in both groups; however, fistula of wound healing was less frequent in the arginine-supplemented group. Both groups had wound infections that were similar.

The results of this study showed that administration of an enhanced formula (supplemented with 17 grams of arginine/day) reduced major postoperative complications and the length of postoperative stay significantly without a high rate of diarrhea. Although this study may provide evidence that arginine supplementation does enhance wound healing, further research is needed to determine the therapeutic dose of arginine required to enhance wound healing.

Reference

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Submitted by Julie Sanders, Graduate Student and Dietetic Intern, Georgia State University

Probiotics cont'd

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Update

Sitagliptin (Januvia) is a new drug for the management of type 2 diabetes (T2DM). Sitagliptin is part of a new class of agents known as dipeptidyl peptidase IV (DPP-4) inhibitors.

Dipeptidyl peptidase IV is an enzyme that rapidly deactivates the gastrointestinal hormones glucagon-like peptide-1 (GLP-1) and gastric inhibitory peptide (GIP). These hormones are known as incretins and they play an important role in the maintenance of glucose homeostasis. Incretins affect the amount of insulin released by the beta cells of the pancreas after a meal. The presence of glucose in the small intestine stimulates their release. Incretins stimulate the beta cells to secrete more insulin. Incretins also slow down gastric emptying [thereby decreasing the rate of nutrient absorption] and they inhibit glucagon release. Individuals with T2DM who have a decrease in the incretin response, may benefit from using this drug. DPP-4 inhibitors are considered weight neutral—they do not promote weight gain or weight loss.

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