

# OHSU OREGON HEALTH & SCIENCE UNIVERSITY

# LIPID CLINIC NEWS

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The Lipid Clinic is located in Suite 330, 3rd floor of the Physicians' Pavilion at OHSU. To make Lipid Clinic appointments, call: (503) 494 - 3273.

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## In This Issue

- *Tribute to Dr. Roger Illingworth*
- *Will Folic Acid Reduce Coronary Mortality?*
- *Fidgeting and Weight Loss: Another Way to Burn More Calories*

## Dedication to Dr. Roger Illingworth

*By Dr. William Connor*

This issue of the Lipid Clinic News is dedicated to Dr. Roger Illingworth, former Director of the Lipid Disorders Clinic, who retired from his active professorship last year. Dr. Roger Illingworth has had a distinguished career, which spanned over a quarter of a century. He obtained his Ph.D. at the University of Liverpool in England in the chemistry of the brain, particularly phospholipids. Then, with his wife, Joyce, he migrated to the United States to take a fellowship with Dr. Oscar Portman at the Oregon Regional Primate Center where he did lipoprotein turnover studies in rhesus monkeys.

I became acquainted with Dr. Illingworth when Sonja and I moved to Oregon in 1975. Dr. Illingworth was then

thinking of medical school and enrolled in the University of Miami. We made plans for him to come back to take his residency in Internal Medicine at Oregon Health Sciences University. He did that and had a period of fellowship, and then was on his own to a noteworthy career.

Roger made a study of two important clinical conditions. In one, abetalipoproteinemia, the plasma cholesterol level is exceptionally low, and in the other, familial hypercholesterolemia, the plasma cholesterol and the LDL are exceptionally high. Of course, there are only a few patients with abetalipoproteinemia, but Roger did studies in the Clinical Research Center on the three patients that were available. He discovered that their low LDL cholesterol concentrations did not prevent them from synthesizing hormones from the adrenal gland and from the ovaries and testes.

His studies in familial hypercholesterolemia were remarkable because he was among the first to recognize the great potential of statin drugs (Mevacor or lovastatin were the first to be developed). Dr. Illingworth pioneered in the initial clinical studies and has since carried out a number of trials with the various statin drugs, which have come into clinical use to lower plasma cholesterol levels.

He has served on national committees, including the F.D.A. Endocrine and Metabolism Advisory Panel, the American Board of Nutrition, and he was a member of the First National Cholesterol Education Program (NCEP) Expert Panel on recommendations for the detection, evaluation and treatment of high blood cholesterol in adults. He was also a member of the NCEP III Panel. He has published more than 200 papers in medical and scientific journals.

Dr. Illingworth retired with some reluctance because he loved seeing his hundreds of patients and carrying out research work. He is still involved in research in macular degeneration and the role of two nutrients, lutein and zeaxanthin, in preventing this condition.

It is a pleasure for me and all of us to have his cheerful early morning greeting and farewell in the evening as he comes to the office most every day. We wish him well for the future and wanted to let you know how much we value his contributions to medical science and to his patients.

**Lipid Clinic News can be found online at**  
[www.ohsu.edu/medicine/divisions/endo/lipidnews](http://www.ohsu.edu/medicine/divisions/endo/lipidnews)

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## Farewell Dr. Glenn Gerhard, Welcome Dr. Bethany Klopfenstein

Due to his other research interests, Glenn Gerhard, MD will no longer be working in the Lipid Disorders Clinic. We wish him well with his Atkins Diet research and with his new activities in Vancouver, Washington. We would also like to extend a warm welcome to Bethany Klopfenstein, MD, our newest member of the Lipid Disorders Clinic. Dr. Klopfenstein, who is board certified in Internal Medicine and Endocrinology, is interested in management of type 1 and 2 diabetes and lipid disorders. She is a great asset to our team!

### Ask the Dietitian

**Q:** *Every time I go to the store, I see a new food product labeled as “100 Calories”. It used to just be Nabisco’s “100 Calorie Packs”, but lately I’ve seen granola bars and even 8-ounce cans of Coke with 100 calories. Can these products really help people lose weight or are they just another gimmick?*



**A:** Limiting snacks to 100 calories is a good idea for people who are trying to control their weight. These 100 calorie snacks are a convenient way to keep track of how much you’re eating, and to help parents control their kids’ intake of junk food. They might also help satisfy your desire for that sweet cookie or salty chip.

On the flipside (there are two sides to every story, right?), these snacks are expensive, often more than twice as costly per ounce as the products they mimic. For example, with a full bag of pretzels, the cost is about 17 cents per ounce. With the 100 calorie packaging, the same pretzel will cost close to 40 cents per ounce.

Another question is, “Are they really satisfying?” When you buy a 100-calorie Oreo pack, keep in mind that you will not be eating a real Oreo cookie. Instead, you will have chocolate wafer cookies that taste similar to the real thing, but are definitely not Oreos. If one of these bags satisfies you, great. However, one dietitian in our office reports not feeling satiated unless eating at least 2 bags, which defeats the purpose. (She stopped purchasing them for this reason.)

What about the nutritional value? While they are low in calories, fat (including both saturated and trans fats) and sugar, they are not especially nutritious. Containing very little fiber, protein, or naturally containing vitamins and minerals, they are still essentially highly processed snack foods.

**Bottom Line:** If you are one of the lucky few that feels satisfied with just one bag, then occasional use of these products is justifiable. However, there are many other 100 calorie more *nutritious* snacks in your very own kitchen! See below for ideas.

### Make Your Own 100 Calorie Snacks

Many fruits: Ex. 1 apple, 1 medium banana, or 1 orange  
Nuts: 10 almonds, 17 peanuts, or 2 tablespoons sunflower seeds  
1 cup unsweetened applesauce  
2 graham cracker squares with 1 teaspoon peanut butter  
3 ounces low-fat cottage cheese and 3 whole-wheat crackers  
6 ounces light yogurt

## Will Folic Acid Lower Coronary Mortality?

Numerous studies suggest that blood homocysteine levels are associated with lower rates of coronary heart disease and stroke. Folic acid and vitamins B<sub>6</sub> and B<sub>12</sub> are the most important dietary determinant of homocysteine, an amino acid that may damage the inner lining of the arteries and increase stickiness of the blood platelets. This damage and stickiness may cause blood clotting and lead to blockages.

In a recent study in the *New England Journal of Medicine*, called the Heart Outcomes Prevention Evaluation (HOPE) 2 study, researchers evaluated the association between folic acid and B vitamin supplementation with coronary heart disease and stroke. The study selected a subgroup of participants to further evaluate folate fortification of food. Patients were randomly assigned to receive either a combined pill containing 2.5 mg folic acid, 50 mg vitamin B<sub>6</sub> and 1 mg vitamin B<sub>12</sub>, or placebo.

### The Results?

Daily administration of folic acid, vitamins B<sub>6</sub> and B<sub>12</sub> did indeed lower homocysteine levels significantly. However, it *did not* reduce incidence of primary outcomes (death from cardiovascular disease, myocardial infarction and stroke) during a 5-year period, as one might expect.

### What Do Other Studies Show?

Sonja Connor, MS, RD, in our research group recently published a study on the association between dietary folic acid and heart disease in Central and Eastern Europe. Her report suggested that in these countries, most of the variation in coronary mortality was explained by folate intake. In other words, diets low in folate-containing foods may be a major contributing factor to increased coronary risk in these European countries.

### Bottom Line

Dietary folate intake is important in overall health and still appears to play a role in reducing coronary events. However, we believe food is the best source of folic acid. What are some foods high in folic acid? In *non-enriched* foods, it is highest in foods like legumes (lentils, pinto beans, garbanzo beans, etc.) and green vegetables such as spinach and broccoli. In *enriched* foods, you will find high levels in breakfast cereals, rice, pasta and bread products. Do you notice the overlap between the high folic acid foods and high fiber foods? Another benefit of those high fiber foods we love!



NEJM 2006; 354  
JADA 2004; 1793-1799

## Research Highlights

### Calcium Intake and Weight Loss

You may have heard by now of a possible link between calcium intake and weight loss. The question is this — could eating dairy products really help you lose weight? According to a study published in the *American Journal of Clinical Nutrition*, an increase in dairy calcium intake does *not* lead to a reduction in body weight or fat mass in young women aged 18-30 years old. Researchers followed 155 healthy young women for one year measuring dietary calcium intake, energy intake, physical activity, weight, height, resting and post-exercise heart rate, body fat mass and lean mass. The analyses showed that there were no significant reductions in body weight, BMI, fat mass or lean mass. The subjects did not burn more fat because the body fat mass did not decrease.

So what does this all mean? Increasing your daily intake of dairy calcium in order to lose weight and reduce fat mass will not be effective by itself. However, consuming nonfat and low-fat dairy products to help meet your recommended calcium needs (1300 mg/day for 9-18 year olds and 1000 mg/day for 19-50 year olds) is part of a healthy balanced diet for maintaining bone health.

*Am J Clin Nutr* 2005; 81 (751-760)

### NEAT Way to Manage Weight

We were just discussing this topic at coffee break, when lo and behold, a research article surfaced to validate our suspicions! We've known for a long time that "fidgeting" burns calories and helps keep people lean, but could not put our fingers on research proving it.

Dr. Levine and his team at the Mayo Clinic designed a study to actually measure calories burned in non-exercise activity thermogenesis (NEAT) — in other words, activities other than planned exercise (such as sitting, standing, walking, talking, fidgeting, etc.) They studied 10 lean men and women and 10 slightly obese ones — all of whom described themselves as "couch potatoes". They equipped them with special underwear carrying sensors that measured their body movement periodically for 10 days. Their main observation was that the obese individuals remained seated for about 2½ hours a day *longer than* the lean subjects. While this may not sound like much, it amounts to about 350 kcals/day in energy expenditure, which is quite significant considering this means no extra trips to the gym!

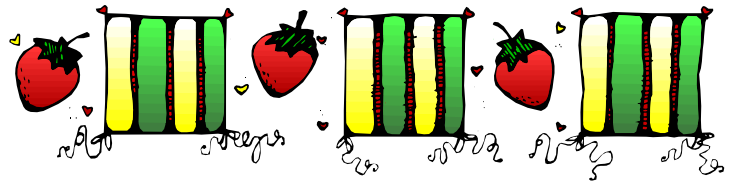
You might be wondering, "Which comes first, the chicken or the egg?" In other words, is less movement a result of obesity or a cause of it? To help determine this, the researchers put the obese participants on a "diet" resulting in 8 kg weight loss (almost 18 pounds). Meanwhile, they overfed the lean subjects, resulting in a 4 kg weight gain (about 9 pounds). Once again, they



measured their movement to determine whether extra pounds resulted in less movement. Their findings? Both the lean and obese subjects maintained their original activity levels, regardless of weight gain or weight loss. This suggests that our activity habits are biological rather than environmentally determined.

While this study has its limitations regarding recommendations for weight loss, they clearly demonstrate that small changes in the activity of daily living can have a profound impact on energy expenditure.

*Science* 2005; 307:584



## New Product Review

### Amy's "Light in Sodium" Organic Soups

Do you love great-tasting soups but hate the hassle of preparing it? With summer here, it's nice to have some convenient ready-made soups on hand to accompany that grilled chicken or fish. After all, who wants to spend hours in the kitchen on a hot summer day? We've found a line of soups that we think you'll enjoy as much as we do. Amy's Organic Soups "Light in Sodium" includes such tempting flavors as *Organic Butternut Squash*, *Organic Cream of Tomato*, *Organic Lentil Vegetable* and *Organic Chunky Tomato*.

Amy's Organic Soups can be found in a variety of grocery and specialty stores. (Unfortunately, the "light in sodium" varieties are more difficult to find. You might have to ask your store to stock it.) To find a location near you, visit [www.amys.com](http://www.amys.com) and click on "Store Locator".

### Trader Joe's Cacciatore Sauce

Do you want it to look like you spent hours in the kitchen when you really only spent minutes? Then be sure and try Trader Joe's Cacciatore Sauce, a bottled tomato and herb-based sauce to which you add cooked chicken, vegetables or whatever else you'd like. Try sautéing some chopped onion and garlic, then simmering in the sauce along with cooked chicken breast and a sprinkle of frozen peas for color. Serve over your favorite pasta, such as penne or vermicelli. (Hint: If you hide the jar, nobody will know it's not homemade!)



## Lemon Garlic Halibut

*With barbecue season here, it's time to "wow" your guests with this recipe. The most critical taste-tester on our staff describes this recipe as "concentrated deliciousness".*

3 cloves garlic, minced  
2 teaspoons olive oil  
3 tablespoons chopped fresh basil  
1/2 teaspoon (or less) Lite Salt  
1 teaspoon pepper  
3 tablespoons freshly squeezed lemon juice  
2 teaspoons chopped parsley, divided  
4 halibut fillets (5-6 ounces each)

### Directions:

Combine garlic, oil, basil, Lite Salt, pepper, lemon juice and 1 teaspoon parsley. Add fish and marinate at least 2 hours. Place on broiler pan or grill, reserving liquid. Broil about 5 minutes on each side. Brush with remaining marinade and heat 1 minute. Sprinkle with remaining parsley.

Makes 4 servings.

Per Serving:  
Calories 144  
Sodium 230 mg  
Fiber trace gm

Total Fat 4 gm  
Saturated Fat 1 gm  
Cholesterol 68 mg  
Cholesterol-Saturated Fat Index 4



