

LIPID CLINIC NEWS

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Should Statins Be Used in Children with FH?

Familial hypercholesterolemia (FH) is a genetic form of high cholesterol, characterized by severely-elevated LDL cholesterol levels from birth. Children with FH have endothelial dysfunction and increased carotid intima-media thickness (IMT), both of which lead to premature atherosclerosis. In fact, prepubescent children with FH already exhibit impaired endothelial function. While statin drugs are typically prescribed for adults with FH, until recently there were some questions of the safety and efficacy of using these drugs in children. In the past, children with FH have been treated with dietary therapy, along with bile acid resins such as cholestyramine and WelChol, until adulthood. Statin drugs were typically

withheld until adulthood due to the lack of evidence of their safety. However, there is great concern that postponing pharmaceutical treatment until later will contribute to arterial lesions in young FH patients.

Methods

To help answer this question, 214 children with FH (ages 8 to 18) were randomly assigned to receive either pravastatin (a statin drug used to lower cholesterol levels) or a placebo. While the primary outcome during the 2-year study was the change in carotid IMT (a marker of atherosclerosis), researchers also looked at growth and maturation, various hormone levels and muscle and liver enzymes. During the study, children were instructed to continue a fat-restricted diet and to maintain their current level of physical activity.

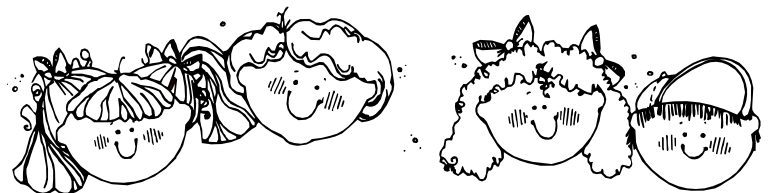
The Results?

Two years of pravastatin therapy led to a significant reduction of LDL cholesterol levels and regression of carotid atherosclerosis in children with FH, whereas the placebo group exhibited a slight *increase* in LDL and progression of atherosclerosis. In addition, they reported no adverse effects on growth (both height and weight increased at a similar rate), sexual maturation (onset of menses and testicular volume), hormone levels or liver or muscle tissue.

Conclusion

While this 2-year study is one of the most extensive to date, the authors noted that data on even longer-term safety and efficacy of statin therapy in children are needed. It is still best to emphasize bile acid binding resins, a low-fat eating style and plenty of physical activity. Each young patient with FH needs individual evaluation for further pharmaceutical therapy.

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Ask the Dietitian

Q: I enjoy eating fish, but am a little confused about the difference between wild and farm-raised fish. I've heard that farmed salmon contains high levels of PCBs and may pose a health threat, but I know that fish is an important part of a healthy diet. Besides, the availability of wild fish is limited. Please help!



A: While this argument is controversial, we believe it is better to consume a diet rich in fish (possibly including farm-raised fish) than no fish at all. Here are the reasons why:

- Consuming at least two fish meals per week is important in cardiac health because of the heart-protective omega-3 fatty acids found in fish.
- According to the FDA, the average level of PCBs (chemicals called polychlorinated biphenyls, thought to be “probable human carcinogens” by the EPA) in farmed fish are well below the limit for seafood. In a sampling of farmed-salmon conducted by the EPA, the average level of PCBs was 27 parts per billion (ppb); the FDA limit for seafood is 2,000 parts per billion.
- While the EPA has established stricter guidelines for farmed-fish (they recommend limiting fish with PCB levels between 24 to 28 ppb to 8 ounces a month), this is based on a small sampling of farmed fish. Also, their guidelines are based on the amount of PCBs thought to cause one additional cancer case per 100,000 people over a 70-year lifetime. Compare this to decades of high quality research showing that two fish meals/week can lower your risk of heart disease, our nation’s number one killer.

Bottom Line: The American Heart Association’s advice is to eat 2 fish meals/week. By varying the type and source of fish, you will limit exposure to any one particular contaminant and shouldn’t be putting yourself in any danger zone.

In the News

How Much Are YOU Eating Out?

With the increasing number of restaurants popping up on every street corner and strip mall, it is obvious that Americans are EATING OUT! But just how much is this affecting our budgets and caloric intake? In a shocking report by The Keystone Center, commissioned by the FDA, Americans have been spending an alarming 46% of our food budget on foods prepared away from home since the late 1990s. That’s almost half of our food dollars! In addition, we’re consuming 32% of our daily calories, 32% of our added sugars and 37% of our daily fat from restaurant or takeout foods. What are our favorite foods when eating out? You guessed it--hamburgers, French fries and pizza. Oh my!

The 134-page Keystone Report encourages restaurants to do their part in battling American’s obesity epidemic by decreasing portion sizes, putting more fruits and vegetables on their menus and providing nutrition information to their customers. To learn more about this forum, visit: www.keystone.org/spp/documents/Forum_Report_FINA_L_5-30-06.pdf

Research Highlights

Body Mass Index and Death Rate

Body Mass Index (BMI) is a quick tool used to assess obesity; it is calculated by dividing the weight in kilograms by height in square meters. BMI correlates with health risks, but the relationship between overweight and death risk remains controversial. Two studies recently published in the *New England Journal of Medicine* tackled the issue of BMI and mortality risk, one in Korea and one in the U.S.

Korean Study: In 1.2 million Korean men and women between 30 and 95 years of age, researchers gathered data over a 12-year period on death from any cause as well as from specific diseases (cancer, heart and respiratory disease). Their findings? In both men and women, the average baseline BMI was 23.2. Risk of death from any cause was lowest among patients with a BMI between 23.0 to 24.9, while risk of death from heart disease or cancer was highest among people with a higher BMI.

U.S. Study: In 1/2 million U.S. men and women between the ages of 50 to 71 years, studied for up to 10 years, researchers found an increased risk of death in both the highest and lowest BMI categories in both men and women. When the analysis was limited to healthy people who had never smoked, the risk of death was associated with both overweight and obesity. In an analysis of BMI during midlife (defined as 50 years of age) among those who never smoked, these associations became even stronger, with death risk increasing 20-40% among overweight subjects and increasing two- to three-fold among obese individuals.

Conclusions: Both studies confirm that a higher BMI is associated with increased risk of death.

NEJM 2006; 355 (779-787); NEJM 2006; 355 (763-778)

Do We Consume More Calories When a Food is Labeled “Low-Fat”?

It seems so obvious. If you reduce fat and calories in a food product, you will automatically consume fewer calories, right? Not so fast! Investigators at the Nutrition Department of The Pennsylvania State University have shown otherwise. After recruiting 48 healthy, non-dieting women, researchers gave them a fixed amount of three different yogurts ranging from low-fat, low-calorie to high-fat, high-calorie, or no yogurt. Half the time, yogurt was presented with labels that said either “high-fat yogurt” or “low-fat yogurt”. The other half of the time, the yogurt was provided with no label. Thirty minutes later, lunch was served.

Here’s what they found: when the subjects were given information that the yogurt they were eating was “low-fat”, they actually consumed *more* calories during lunch than they did after receiving the yogurt with a “high-fat” label (even though the calories were almost identical). In other words, if they *thought* they were eating low-fat yogurt, they overcompensated by taking in more calories at the next meal than if they received no information.

Caution: This study serves as a reminder to be conscious of *what* and *how much* we’re eating because our physiologic hunger and fullness signals can be overridden by our beliefs about the fat content of a food. Eating a low-fat food product is not a license to overindulge later in the day!

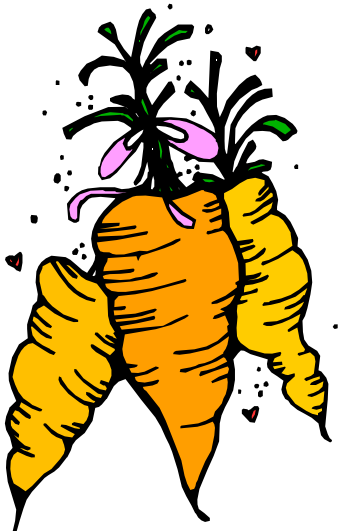
Recipe Makeover-- Roasted Carrot Soup

Every now and then a delicious recipe comes along that we can't wait to modify. This happened recently at a beach weekend getaway, when a good friend brought along a pot of Roasted Carrot Soup to serve with sandwiches at lunchtime. Piping hot, with a delightful blend of sweet and spicy and bursting with a roasted carrot flavor, we were shocked when, back at the office, recipe analysis revealed that our perfect find was loaded with fat and calories. Just 1 cup of soup contained 303 Calories and 21 grams of fat, with half of that coming from saturated fat. Sodium came in at a whopping 904 milligrams per serving. This recipe was perfect for modification.

Dietitians to the Rescue—What We Did:

- The first change was a simple one. The original recipe called for sautéing the onions and celery in 4 tablespoons vegetable oil. We simply eliminated the oil altogether and used nonstick cooking spray to sauté the vegetables.
- Next, we substituted light coconut milk for the regular coconut milk.
- We also used reduced-sodium vegetable broth instead of typical vegetable broth, and replaced a small amount of it with water.
- The biggest change was eliminating the 10 tablespoons of butter, used to make a roux for thickening the soup, and instead using a cornstarch and water mixture for thickening.
- We switched to reduced-fat peanut butter.
- We gave the option of using a smaller amount of honey if you prefer less sweetness (the original called for ¼ cup honey—we give the option of 2 to 4 tablespoons).

With these changes, we were able to produce a soup with only 161 Calories and 5 grams of fat per cup. Sodium was reduced to 493 milligrams.



Roasted Carrot Soup

This is a delicious carrot soup with a unique Thai flavor. Don't let the number of ingredients intimidate you—it is well worth the effort. This soup received the highest ratings in recipe testing.

2½ pounds peeled carrots, sliced into ½ inch pieces
5 whole garlic cloves, peeled
1 tablespoon sesame oil

2 cups chopped onion
1½ cups chopped celery
1 cup carrot juice (such as Odwalla® brand)
1 cup lite coconut milk
6 cups reduced-sodium vegetable broth
2 cups water

4 tablespoons cornstarch
½ cup cold water

2 tablespoons freshly grated ginger
1 tablespoon sweet chili sauce
sprinkle of cayenne pepper, to taste
2 to 4 tablespoons honey (depending on how sweet you like it)
1 teaspoon reduced-fat smooth creamy peanut butter
1 tablespoon rice vinegar

Preheat oven to 375°. In mixing bowl, toss carrots, garlic and sesame oil. Place in a shallow roasting pan and roast for 1 to 1½ hours or until soft, stirring every 30 minutes. When soft, place in a food processor and process until smooth.

In a large soup pot coated with nonstick cooking spray, toss onion and celery and cook until tender. Add the carrot juice, coconut milk, vegetable broth and water and bring to a boil. Reduce heat and add pureed roasted carrot mixture.

In a small bowl, dissolve the cornstarch in ½ cup cold water. While stirring the soup, add the cornstarch mixture. Add ginger, chili sauce, cayenne pepper, honey, peanut butter, and rice vinegar. Simmer for 30 minutes.

Makes 11 cups.

Per cup:

Calories 161
Sodium 493 mg *
Fiber 5 gm

Total Fat 5 gm
Saturated Fat 3 gm
Cholesterol 0 mg
Cholesterol-Saturated Fat Index 4

** The sodium content is at the upper end of our sodium guideline range (which is 300 to 500 mg/entrée). Be sure and consume plenty of lower sodium foods throughout the rest of the day.*

Antipasto Bowl

This quick-to-fix "salad" has been a real crowd pleaser at several summer potlucks. To hasten assembly, you can prepare the dressing a day or two in advance. Store in refrigerator no more than 8 hours before serving.

3 cups sliced asparagus (about 2-inch slices)
3 cups quartered mushrooms (about $\frac{3}{4}$ pound)
1 cup thinly sliced red bell pepper
 $\frac{1}{2}$ cup pitted ripe olives
3 ounces cubed part-skim mozzarella cheese (about $\frac{2}{3}$ c.)
1 jar (11.5 ounce) pickled pepperoncini peppers, drained

Vinaigrette Dressing:

$\frac{1}{3}$ cup cider vinegar
 $\frac{1}{4}$ cup finely chopped fresh parsley
2 tablespoons olive oil
2 teaspoons dried oregano
1 teaspoon sugar
 $\frac{1}{4}$ teaspoon salt
 $\frac{1}{4}$ teaspoon black pepper
3 cloves garlic, minced



Directions:

Steam asparagus, covered, for 2 minutes. Drain and plunge into ice water; drain. In a large bowl, combine asparagus, mushrooms, bell pepper, olives, mozzarella cheese and pepperoncini peppers.

To Prepare Vinaigrette Dressing:

In a small bowl, combine all dressing ingredients. Stir well with a whisk.

When Ready to Serve (or a few hours before):

Pour Vinaigrette Dressing over vegetable mixture. Cover and marinate in refrigerator, stirring occasionally. Serve chilled or at room temperature.

Makes 20 servings (1/2 cup each).

Per Serving:
Calories 35
Sodium 90 mg
Fiber 1 gm

Total Fat 1 gm
Saturated Fat 1 gm
Cholesterol 2 mg
Cholesterol-Saturated Fat Index 1

