

## Celebrate Success

**April, May & June 2014**

### **Hair loss after bariatric surgery**

Hair loss after bariatric surgery can be a concern for individuals. The average person has about 150,000 strands of hair on their head and sheds approximately 50 - 100 strands of hair per day (1). On average, hair typically grows one centimeter per month (1). Hair growth is divided into three phases. The *anagen* phase is when the hair is actively growing, while the *catagen* phase (transition phase) is when hair follicles shrink. The resting phase or *telogen* phase is when hair is shed. Hair follicles on average spend two to eight years in the anagen phase, four to six weeks in the catagen phase, and two to three months in the telogen phase (2).

Approximately 90% of hair on the scalp is in the anagen phase and 10% is the catagen or telogen phases (1). Each hair follicle grows independently. Therefore, some hairs are growing, some are resting, and others are shedding, which prevents simultaneous shedding of hair (1, 2). Hormonal changes, pregnancy, thyroid disorders, autoimmune disorders, excessive stress, nutritional deficiencies (that may result from bariatric surgery), medications, surgical trauma, acute and chronic illness can all cause hair loss due to a change from the anagen to telogen phase. *Telogen effluvium* occurs when hair follicles in the anagen phase enter the telogen phase prematurely, creating an increase in hair shedding, with hair loss seen about three to five months after surgery (2,3). There is no known treatment for hair loss due to telogen effluvium. Once the hairs that shifted to telogen have fallen out, hair will regrow from the follicle. If hair loss is related to surgery and not nutritional deficiencies the hair will eventually grow back. Hair loss after bariatric surgery is usually due to the stress of surgery and rapid weight loss. We do know that a diet low in protein and calories can cause hair loss as well. Oral intake after bariatric surgery is typically 600 - 800 calories or less per day. If hair loss begins six months after surgery or continues for more than 12 months after surgery, nutritional implications should be evaluated.

Blood tests to evaluate protein, iron, zinc and biotin should be ordered to check for deficiencies, given they can all contribute to hair loss. Consuming 60 - 80 grams of protein per day is recommended to prevent the loss of lean muscle mass and hair. Often protein supplements are needed to help individuals reach their daily protein goals, especially during the first year following surgery. Iron is an essential mineral required for several vital bodily functions. Symptoms of deficiency can include hair loss, anemia, and fatigue, difficulty swallowing and impaired learning ability. Checking ferritin levels in the blood can be used to screen for iron deficiency. The normal ferritin range for men is 15 - 200 ng/mL and for women is 12 - 150 ng/mL (4). If you are experiencing hair loss and are unaware of your iron status, talk with your bariatric surgeon about having your level tested and whether or not a supplement is warranted. Zinc is a trace mineral necessary for the function of enzymes involved in protein synthesis, digestion, immunity, and regulation of gene transcription (5). Symptoms of zinc deficiency include hair loss, muscle wasting, poor wound healing, impaired immune function, diarrhea, reddened skin areas and a reduced ability to taste food. High levels of zinc and iron in the blood are also undesirable so having levels checked by your bariatric physician is recommended. Biotin is a water soluble B vitamin and is responsible for cell growth, fatty acid and amino acid production (building blocks of protein), and the metabolism of carbohydrates, fats, and amino acids (6). Though biotin deficiency is not common, hair loss can be a symptom.

Keeping in close contact with your bariatric surgeon and your primary care physician after surgery is vital to maintain proper health. For those individuals who experience hair loss, the correction of a known nutritional deficiency can help decrease the risk of further loss. If deficiencies are not found, further assessment should be performed by your physician(s) for other possible causes as noted above.

#### *References:*

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3. Biesemeier C, Garland J, American Dietetic Association. Weight Management Dietetic Practice Group. ADA pocket guide to bariatric surgery. Chicago, Ill.:American Dietetic Association, 2009.
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5. Cousins RJ, Blanchard RK, Moore JB, et al. Regulation of zinc metabolism and genomic outcomes. *J Nutr.*2003; 133:1521S-6S.
6. Zempleni J, Hassan YI, Wijeratne SS. Biotin and biotinidase deficiency. *Expert Rev Endocrinol Metab.* 2008;3:715-724.

### **Arthritis**

Did you know that for every pound of weight you gain you add four pounds of pressure on your knees and six times the pressure on your hips? Many Americans suffer from arthritis or joint pain. Arthritis occurs when the joints become inflamed which in turn causes pain, stiffness, and tenderness. Tissue damage can result when inflammation becomes chronic as with arthritis. The risk of developing arthritis increases with age, but even young children can develop arthritis. Repetitive movement or heavy lifting can cause stress to joints and cause injury, which can lead to arthritis also. A sedentary lifestyle also allows muscles to become weak, leaving the joints unprotected.

The most common types of arthritis include osteoarthritis, rheumatoid arthritis and gout. In *osteoarthritis*, the cartilage covering at the end of the joint bones slowly wears away, leading to bones rubbing together causing inflammation. The most common joints affected are found in the hands, knees, hips and spine. Excess body weight causes increased force which in turn causes the cartilage to break down sooner. Weight loss and exercise can decrease the pain and progression of osteoarthritis, where as many medications only help decrease the pain. Bariatric surgery for weight loss can have a significant impact on obesity-related arthritis. *Rheumatoid arthritis* is known to affect the joints of the hands, wrists and knees but can also affect the skin, eyes, and nerves. Rheumatoid arthritis is an autoimmune disorder in which the body's immune system attacks itself, causing the joint lining to swell. The swelling/inflammation can spread to the surrounding tissues and damage cartilage and bone. Lastly, *gout* is often associated with the big toes but it can also affect the knees and wrists. Gout is the result of uric acid building up in the joints, which causes pain and swelling. High intakes of alcoholic beverages (beer) and diets rich in red meats can cause uric acid levels to rise in the blood stream. High blood pressure and use of diuretics also increases the risk of developing gout. Obese men are at a greater risk of developing gout compared to those that are at a healthy weight. A diet low in purines can help lower uric acid levels and decrease the risk of future attacks.

Maintaining a healthy body weight, participating in a regular exercise program, choosing a healthy well-rounded diet and avoiding repetitive actions that cause trauma are excellent ways of keeping osteoarthritis at bay.

## **Healthy grocery shopping tips**

1. Plan ahead. Gather your healthy recipes and plan your meals for the week.
2. Make a list before you go. Take stock of your refrigerator and pantry, and then make a grocery list of all of the foods and ingredients that you need for your recipes.
3. Stick to your list. If you make a promise with yourself to buy only those items on your grocery list, you will save money and be less likely to buy foods that may not be as healthy.
4. Eat before you go. Don't grocery shop when you are hungry. Eating a healthy, high protein snack such as low-fat cottage cheese or a low-fat cheese stick with some fruit will help you from making impulse buys.
5. At the grocery store, think about how you should fill your plate as you fill your grocery cart. Make one quarter of what you are buying lean proteins like meat, fish, chicken, and low-fat cheese. Half of your purchases should include non-starchy vegetables like spinach, broccoli, zucchini, and cauliflower and fresh or canned fruit (packed in water). The final quarter of your purchases should include whole grains (brown rice, lentils, whole wheat pastas and breads). If you plan ahead and shop smart you'll have everything you need on hand to prepare healthy, well-balanced meals.
6. Remember at meal times to not eat and drink at the same time. This will help promote continued success with your weight loss/maintenance efforts.

### **Upcoming Support Group Meeting Dates**

*All meetings are 6:30 – 8 p.m. in the Duffy Wellness Classrooms at McLaren Port Huron*

**April 15:** *Registered Dietitian Nadea Minet - Celebrate Bariatric Supplements*

**May 20:** *Cooking demonstration with Chef Dave Straney*

**June 17:** *Bariatric Surgeon Dr. Nicholas Nunnally*

### **Quinoa and Black Beans**

1 teaspoon vegetable oil	¼ teaspoon cayenne pepper
1 onion, chopped	salt and pepper to taste
3 cloves garlic, peeled and chopped	1 cup frozen corn kernels
¾ cup uncooked quinoa	2 (15 ounce) cans black beans, rinsed and drained
1 ½ cups vegetable broth	½ cup chopped fresh cilantro
1 teaspoon ground cumin	

1. Heat the oil in a medium saucepan over medium heat. Stir in the onion and garlic, and sauté until lightly browned.
2. Mix quinoa into the saucepan and cover with vegetable broth. Season with cumin, cayenne pepper, salt (to taste) and pepper. Bring the mixture to a boil. Cover, reduce heat, and simmer 20 minutes.
3. Stir frozen corn into the saucepan, and continue to simmer about 5 minutes until heated through. Mix in the black beans and cilantro.

Serves: 10

Nutritional Information: ~ 160 calories, 7 grams protein, 29 grams carbohydrate, 2 grams fat, 284 mg sodium and 5 grams fiber.

Source: Allrecipes.com