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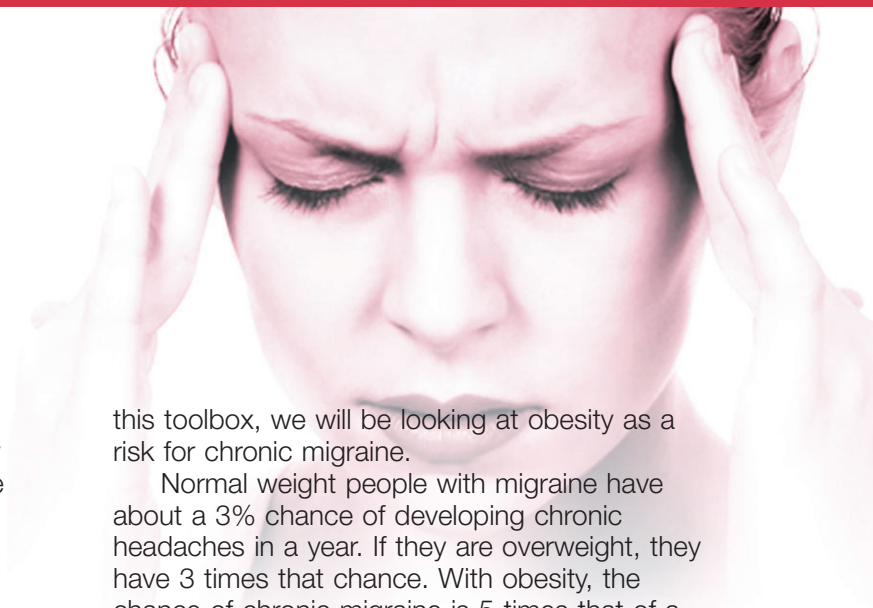
Headache Toolbox



Migraine and Obesity

Obesity is an epidemic problem seen in many people with and without migraine. How are obesity and migraine linked, and what are the risk factors for migraineurs battling the bulge?

First, a definition of obesity is needed. Typically, obesity is defined as a body mass index (BMI) of 30 or more. BMI calculators are available online or as apps on smart phones, but if calculation is desired, this is the formula: Weight in pounds/(inches height)(inches height) × 703.

There is more cardiovascular risk and diabetes risk associated with abdominal obesity, that is, fat around the belly. Because of this fact, it may be useful to define obesity in terms of abdominal obesity as well as total body obesity. Abdominal obesity is defined by waist circumference greater than 40 inches in men or greater than 35 inches in women or waist to hip ratio greater than 0.9 for men and greater than 0.85 for women.

Migraine that occurs more than 15 days per month at least 4 hours per day is considered chronic migraine. Why is it that those who have migraines just a few days per month often slowly progress to a chronic pattern?

There are a number of possible reasons for this increase, some that can be changed, and others that cannot. Using acute pain medicines too frequently is a common reason for transformation to daily headache, but others include too much caffeine, snoring, and sleep apnea, thyroid disorders, head trauma, stress, depression, and anxiety, but for the purposes of this toolbox, we will be looking at obesity as a risk for chronic migraine.

Normal weight people with migraine have about a 3% chance of developing chronic headaches in a year. If they are overweight, they have 3 times that chance. With obesity, the chance of chronic migraine is 5 times that of a normal weight individual with migraine.

Obesity is an inflammatory state in which multiple pain-generating hormones are produced and released from fat cells, including calcitonin gene-related peptide, substance P, tumor necrosis factor-α, and interleukin-6. During a migraine, there is a similar release of these same pain-promoting hormones and neurochemicals. It may be that there is an additive effect coming from the 2 sources of these chemicals, obesity and migraine, that predisposes obese individuals with migraine to have more headaches.

Levels of insulin, glucose, and plaque promoting LDL cholesterol are higher in migraine patients than the general population. This is also true of obese individuals, which may in part contribute to the higher risk of heart and stroke in migraineurs. Coupled with the elevated glucose and insulin in obese and prediabetic individuals, there is again an additive effect.

Obesity has not been found to cause migraines, only to promote their frequency. But with high-frequency migraine, an individual begins to have problems keeping up with work, social and family activities, as well as feeling awful. Clearly, no one wants to be obese, and no one wants to have a lot of migraines, so how can one turn this around?

One suggestion is to keep track of your weight. When you are prescribed a medication for your migraines, ask if it is likely to cause weight gain. If the prescribed drug might cause weight gain, keep tabs on the scale. It is easier to lose a small amount of weight and switch medications early than to report a 20-lb weight gain 6 months after the fact.

Keep active. Small amounts of exercise may not result in weight loss, but regular exercise does reduce stress and anxiety, gets the mind off food, and has been shown to result in fewer headaches. The hard truth is that calories are energy units. If more calories are taken in than are expended in activity, they will be put in storage.

Watch your cardiovascular risks. Knowing that migraine increases the risk of vascular disease, try to limit other factors that can be changed. Controlling blood pressure, cholesterol, blood sugar, and not smoking are ways to lessen the risks present from the inflammatory state of migraine and obesity.

Ultimately, treatment of migraine is not just an issue of taking pills. Medicine is only one part of a comprehensive approach to migraine. Successful treatment will need to include the health of both the mind and the body. Addressing obesity as part of migraine treatment will result in greater health and successful management.

There are new ways to address obesity when the usual measures of diet and exercise are not working. Bariatric surgery can be considered at that point. How does this surgery affect headaches? Both gastric bypass and gastric lap banding show promise in reducing migraine frequency.

According to limited studies now available, most individuals have a significant decrease in their migraine frequency after these procedures.

Medical treatment of obesity is another strategy. A combination tablet was approved by the Food and Drug Administration in 2012 that contains phentermine and topiramate in a single tablet called Qsymia. In low doses, this tablet appears somewhat protective for headache sufferers, and in higher doses, only 1% of subjects complained of headaches, so this medicine is not believed to cause more migraines. Because obesity seems to fuel migraine frequency, it is possible that in the long run, the weight loss alone would improve headache disorders.

Every individual with migraine wants to have as few of them as possible, as well as lead a healthy, happy, and productive life. Tying in weight control as part of a migraine treatment plan will result in a greater chance of success. Start weighing yourself, and talk with your headache clinician about ways to help you reach your goals.

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