



Fat is Fascinating, Frustrating & FREEZABLE



Have you looked in the mirror and noticed that if you could get rid of a few bulges here and there your former body from college would emerge? Daunted by the risks associated with invasive procedures such as liposuction and laser assisted lipolysis? Discouraged by the lack of progress from trying different diets and going to the gym?



A new outpatient, lunchtime, treatment known as CoolSculpting® now offers

an effective and noninvasive way to eliminate unwanted fat. There are none of the potential risks associated with liposuction nor are there any changes in serum lipids or liver function tests. Frozen fat cells are digested and disposed of by macrophages the body's natural scavenger cells. Fat gradually melts away over 6-12 weeks after CoolSculpting® treatment. What could be easier?

How is it possible to freeze only fat and not skin?

Fat has a unique property: it freezes at a higher temperature than skin. This makes it possible to selectively destroy fat cells by choosing the appropriate cooling temperature and thus, leave the upper skin layer uninjured. CoolSculpting® is a technology that applies an applicator with cooling panels to the outside of the skin. The skin is protected by a special gel pad. Sensors on the cooling panels precisely freeze fat to the correct temperature.

Who is a good candidate for CoolSculpting®?

The ideal candidate is a person who enjoys overall good health, has stable weight, no recent surgery in the area(s) to be treated, and localized, defined areas of subcutaneous fat (fat located under the skin) that has been unresponsive to diet and exercise.

Our patients have been very pleased with the improvement in how their clothing fits and the enhanced results of the overall body contour and shape. As one of our happy patients exclaimed after 2 treatments, "I've gotten my waist back!"



(Before CoolSculpting)



(1 Treatment, 2 Mos After CoolSculpting)

Coolsculpting® is not intended to be a treatment for obesity.

What areas can be treated?

Coolsculpting® is FDA approved for treating unwanted fat on the flanks. In Europe and Asia, it is approved for use on thighs, abdomen, "love handles", "muffin tops," back fat, and bra fat. We have treated all these areas with excellent results.

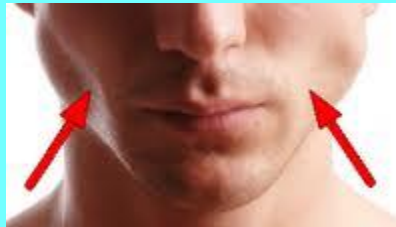
Why do I still have fat in places despite regular exercise and dieting?

Fat cells in the buttocks, hips, and thighs of women are more resistant to diet and exercise because these fat cells have a greater number of α -adrenergic receptors than β -adrenergic receptors. This makes these fat cells more resistant to weight loss compared with fat in other areas of the body.

Certain kinds of fat cells are resistant to reduction via dietary and physically active measures. The ratio of alpha and beta-adrenergic receptors on the fat cell membrane, controls the fat responsiveness to atrophy (shrinking). In women, fat cells located on the outside in the buttocks, hips, and thighs are notoriously

resistant to weight loss.

Attempts to remove resistant fat deposits through dietary measures may result in loss of fat and tissue volume in the face and neck. Such an unanticipated and unwanted surprise will result in a gaunt, aging appearance. This requires correction with dermal filler injections to plump up the skin and stimulate new collagen to replace the lost volume from dieting. Be careful when losing weight. It doesn't always come off in the areas where you were hoping to lose it!



Fat Loss in Face

Once a fat cell develops, it is a permanent cell unless it is removed by liposuction or destroyed by freezing.

How does fat develop?

When caloric intake exceeds metabolic expenditures, extra calories are stored as triglycerides inside fat cells (adipocytes). As surplus pounds accumulate, the existing fat cells continue to enlarge, accumulating more and more lipid. However, there is a limit to how large a fat cell can become. When a certain size is attained, the fat cell is unable to store anymore lipid and preadipocytes (fat stem cells) are recruited to form new fat cells. Some people have the ability to convert stem cells into mature fat cells more readily. So depending on the amount of weight gained, fat cells may either enlarge and/or increase in number.

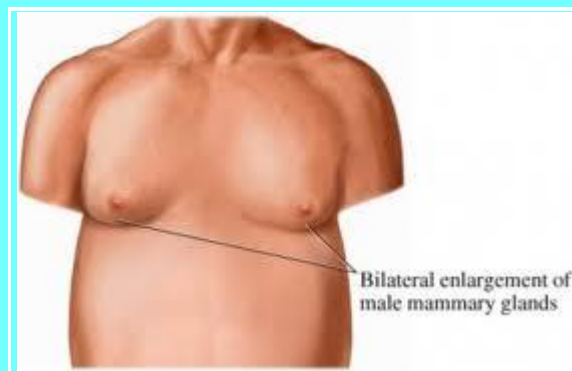
What factors determine where fat will develop?

Fat tissue is metabolically very active; producing many hormones and metabolic factors such as estrogen, leptin, adiponectin, tumor necrosis factor alpha, insulin-like growth factor, plasminogen activator inhibitor-1, lipoprotein lipase, angiotensinogen, and interleukin-6.

The interaction between several different hormones determines where fat is ultimately deposited: cortisol, insulin, testosterone, estrogen, growth hormone, and catecholamine substances such as adrenaline and noradrenalin are the main determinants.

Women tend to deposit fat preferentially in the hips, thighs, and buttock areas. This begins to develop when estrogen production increases during puberty. This is nature's way of storing energy in preparation for future child-bearing events. This fat is very stable and tends to be quite recalcitrant to diet and exercise.

Men tend to accumulate fat in their abdomens. Males, who are significantly overweight, will have increased estrogen production in their fat. This causes a feminizing fat deposition phenomenon and results in enlargement of breast tissue. This can develop to the degree that a support bra may be indicated. Coolsculpting® can help with this condition.



Bilateral enlargement of male mammary glands

Gynecomastia

What are the types of fat located in the body?

Fat is located in 2 main compartments: **subcutaneously and visceraally**. Subcutaneous fat is the fatty layer that you can squeeze with your hands; it is the soft cushion layer in the skin, above the muscle layer. This fat can be eliminated by freezing with Coolsculpting®.

Visceral fat is internal fat that is present around and attached to internal organs such as the heart, kidneys, intestines, and aorta. Smoking and alcohol contribute to visceral fat deposition. This type of fat is not treatable by Coolsculpting® or liposuction. Weight loss can reduce visceral adipose tissue. Excessive visceral fat increases the risk of developing cardiovascular disease and diabetes.

Excess fat stores are associated with an increased production of pro-inflammatory agents. Scientists believe this plays a key role in the development of cardiovascular disease.

What happens if I gain weight after being treated?

The remaining fat cells will enlarge to store the extra triglycerides.

Is there any down time?

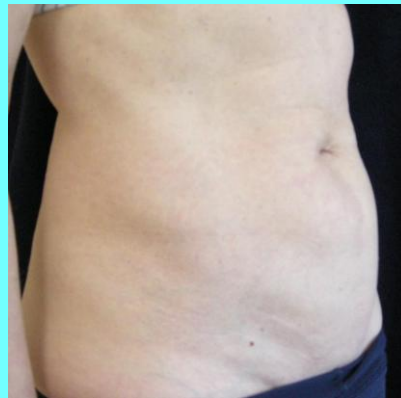
No. There is some soreness and swelling for about 1 week. You can resume regular activities immediately afterwards. No anesthesia, no needles or bandages are needed for Coolsculpting®.

How many treatments are needed?

The number of treatments required to see the desired fat reduction varies from person to person. In general, more treatments are needed to reduce larger fat volumes. Typically, a 20% reduction in the amount of fat is seen with 1 CoolSculpting® treatment. However, some patients have achieved a higher reduction with just 1 treatment. Treatments are performed 1 month apart. Anywhere from 2-4 treatments may be required to see desired results.



(Before CoolSculpting)



(2 Treatments, 2 Mos After CoolSculpting)

There is a 20-23% fat reduction with each treatment. Some patients have experienced 30% or more reduction from 1 CoolSculpting® treatment.

Is there anything I need to do to prepare for the

treatment?

Bring comfortable clothing to wear and an activity to do for an hour while the treatment is being administered. Patients have read, napped, listened to music on their iPod, answered text messages, knitted blankets and one person even consumed a cheeseburger during their CoolSculpting® session.

When will I see results?

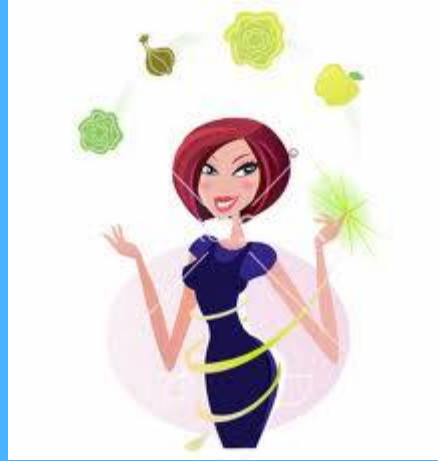
Results may be seen as early as 3 weeks. My patients are typically seeing results in 4-6 weeks.

How do I get started?

Call our office to have an evaluation by Dr. Wong to determine if you are a CoolSculpting® candidate.

Benefit from our special treatment packages and look great for the upcoming holidays.

Fat is determined by, not only the *QUANTITY*, but also the *QUALITY* of food you eat.



It's not just the Quantity of calories consumed but the Quality of the food consumed that has a significant influence in how you gain weight.

The June 23, 2011 issue of the New England Journal of Medicine reports research findings by the Brigham and Women's Hospital and Harvard Medical School on how changes in diet affect long-term weight gain in 120,877 adults.



The authors discovered that weight gain is strongly correlated with diets that include: potato chips, potatoes, sugar-sweetened beverages, unprocessed red meats, processed meats, and potatoes. Weight gain was inversely correlated with consumption of fresh fruit, vegetables, whole grains, nuts and yogurt. Refined grains, starches, and carbohydrates may be less hunger satisfying and stimulate an increase in caloric intake, leading to weight gain. High fiber foods that are less processed require longer to digest and are more satiating and decrease craving for

refined sugars and carbohydrates.

Other Fascinating Fat Facts

- ❖ **In menopause, estrogen levels fall, favoring accumulation of visceral fat.**
- ❖ **In men, testosterone levels decrease with age, which enhances a tendency toward visceral fat deposition.**
- ❖ **Excess fat stores are associated with an increased production of pro-inflammatory agents. Scientists believe this plays a key role in the development of cardiovascular disease.**