Looking and Feeling Your Best

The Langdon Center for Laser and Cosmetic Surgery

Vol. 3, No. 3
www.langdoncenter.com

CoolSculpting: Permanent Fat Removal without Surgery!

It has been known for many years that fat cells are uniquely susceptible to damage from cold temperatures. Only under unusual circumstances is the fat layer exposed to cold enough temperatures for a long enough time for actual damage to occur. Prolonged exposure (one hour) to cold temperatures of around 50°F, which has no adverse effect on skin, will kill about 25% of exposed fat cells. The fat cells will gradually die, and the body's natural cleansing mechanism will remove them.

CoolSculpting is the first technology that can efficiently expose fat cells to cold temperature for the required time period to result in fat reduction, while simultaneously protecting the overlying skin from cold damage. CoolSculpting is the first non-surgical procedure that results in a permanent reduction of fat cells.

At first glance, it seems surprising that such a thing is possible. If it were easy, something like CoolSculpting would have been developed years ago. One reason this special type of damage to fat cells doesn't happen naturally is that normal blood circulation keeps the fat layer relatively warm even if the skin is exposed to cold winter temperatures. Cold exposure that may be severe enough to cause skin damage (frostbite) normally does not damage fat tissue beneath the skin.

The CoolSculpting Treatment

During a CoolSculpting treatment, a large suction cup-like device (the "applicator") draws a fold of skin and fat between two special chilling surfaces that draw heat out of the tissue in a safe, controlled manner. Blood circulation is diminished in the folded tissue so that the temperature in the fat layer drops to the desired level. The treatment is actually quite comfortable for the patient because the area being treated becomes numb from the cold. After 60 minutes of treatment, the suction is released and the applicator (suction cup) is removed by the nurse. The treated area now looks like a large, thick fold of skin that is quite hard to the touch. This hardness is because the fat cells have actually solidified.

Fat cells at normal temperatures are filled with a liquid oil-like material. Just like vegetable oil in the refrigerator, the oil in fat cells solidifies during the CoolSculpting treatment. The nurse next vigorously massages the "frozen" fold of skin and fat. The massaging enhances the damage to the fat cells because crystallized frozen oil can physically disrupt the cell membranes of the fat cells. Within five minutes the solid tissue returns to its normal pliability.

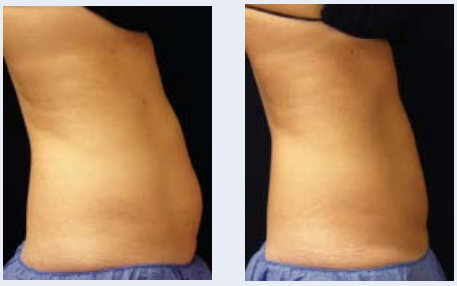
After the treatment, the patient can immediately return to normal activities (there is no "down time" or recovery period). The treated areas will continue to feel numb for several weeks after the treatment. Over the next 2 to 3 months, the body works to eliminate the fat cells that have died. The breakdown and removal of dead cells is a normal process that occurs in many types of tissue in the body. Because fat cells are not able to replace themselves by the usual process of cell multiplication, the fat reduction after a CoolSculpting treatment is permanent.

continued on next page

Applicators: One Size Does Not Fit All

Several different applicators vary by size and shape. Each applicator includes a "suction cup" to conform to a specific part of the body. A 60-minute treatment with one applicator on one area of the body is referred to as a "treatment cycle" or simply a "cycle." Patients who are the best candidates for CoolSculpting treatment have well-defined bulges of fat that can be effectively drawn into the applicator when suction is applied. Typical body areas that can be treated include the upper and lower abdomen, the flanks, and the upper inner thighs. The newest applicator is designed to treat fat in the upper, outer thigh ("saddle bag") area.

All patients are photographed before a CoolSculpting treatment. The areas of the body to be treated are photographed from different angles in a standardized way. Two to three months after the treatment, additional follow-up photographs are taken; these can be compared to the pre-treatment photos to assess the amount of improvement. Although there is usually obvious improvement after the first treatment, many patients will decide to undergo a second treatment of the same body areas. Generally, two treatments will provide twice the improvement expected from one treatment. With each treatment, about 25% of the fat cells that are exposed to the cold temperature will disappear.



Before and 3 Months After: One of Dr. Langdon's CoolSculpting Patients

Join us for "A Cool Night Out" to learn more about CoolSculpting!

By the time you read this newsletter, we have had at least two of our special open house events dedicated to CoolSculpting. The "Cool Night Out" events are free and are held at our office during the early evening. Attendees can enjoy refreshments and see an informative presentation during which we explain the CoolSculpting process and how it works, as well as view "before and after" pictures of actual CoolSculpting patients. The most interesting part of the event is an opportunity to see an actual CoolSculpting treatment taking place. You can talk to the patient being treated and ask her what it is like! Then, you can meet Dr. Langdon and get your own personal consultation for CoolSculpting. Find out if you are a candidate for treatment and which body areas can be "CoolSculpted!"

A patient being treated with CoolSculpting answered questions about the procedure during an actual treatment at one of our "Cool Night Out" events.

Probiotics: A Future Weight Loss Therapy?

In probiotic therapy, beneficial strains of microorganisms are transferred to people in order to improve their health. Probiotics are not mainstream medicine treatment and are poorly understood because little is known about the interactions between human hosts and the trillions of bacteria that reside in their gastrointestinal tracts.

About 10 trillion microbial cells (mainly bacteria) live in our large intestine; they outnumber the total number of human cells in the body by 10 to 1. These microbes are essential to human biology and may play a key role in the development of obesity; it has long been known that the strains of intestinal bacteria in lean and obese individuals are different. A recent study published in *Science* magazine (6 September 2013) shows that when microbes from lean or obese human donors are transferred to the intestines of mice, they can confer similar patterns of obesity in the recipient mice. Moreover, obesity in mice that received microbes from obese human donors can be reversed if they are cohoused with mice who received microbes from lean human donors and also ate a healthy diet. This study presents some of the strongest evidence to date that the principle of probiotics has potential to become an important future treatment for weight loss.

Bacteria from Humans Made Mice Gain or Lose Weight

In this study, the researchers transferred microbes from the intestines of human donors who were either lean or obese into the intestines of germ-free mice. The mice took on the characteristics of their human donors: animals that received the microbes from the obese donors gained significant weight, whereas those that received the microbes from the lean donors stayed lean. All of the mice ate a low-fat, high-fiber diet without restrictions. All it took to make normal mice become obese was for them to acquire intestinal bacteria from obese human donors!

In addition, when lean and obese mice (those that received intestinal bacteria from lean and obese human donors, respectively) were housed in the same cage, the expected weight gain in the "obese" mice was prevented. Analysis of the bacteria in the "obese" mice that were cohoused with the lean mice showed that the "lean" mixture of bacteria passed from the lean mice to the obese mice, conferring protection against gaining weight and keeping these mice lean.

A Low-Fat, High-Fiber Diet Helped Invasion of "Lean" Bacteria

The researchers found that diet played an important role in allowing the successful invasion of "lean" bacteria into the intestines of mice harboring the "obese" bacteria. When the obese mice were cohoused with the lean mice and were fed a low-fat, high-fiber diet, they were "invaded" by the microbes of the lean mice and did not gain weight. In contrast, if the cohoused mice were fed a high-fat, low-fiber diet, the obese mice were not able to acquire the lean intestinal bacteria and thus remained obese.

There are three possible explanations for what appears to be a powerful effect of intestinal microbes on obesity that all involve their primary role in metabolizing fiber in the diet. The products of bacterial fiber digestion, although a source for energy in humans, also can minimize fat storage in adipose (fat) cells, preventing fat cells from enlarging (the main reason fatty areas of the body enlarge with weight gain). These fiber-derived compounds can also result in an increased basal metabolic rate (higher energy use) in humans and can even increase production of hormones that give a feeling of fullness (satiety). All of these effects, especially if combined, can result in weight loss and support the importance of a low-fat, high-fiber diet complementing the effect of beneficial microbes.

The researchers of the recent *Science* study point out that one of the most interesting findings of their study is that of the role of diet along with microbes in preventing obesity. In future studies of humans, it may be necessary to alter diet to facilitate the colonization of useful microbes to increase their benefit. This study elucidates the role of combining microbes and diet in reducing and preventing obesity and points to the possibility of exciting new probiotic therapies for combating obesity.

Breast Reduction by Liposuction

Many women have breasts that are overly large or are out of proportion to their body size. In addition to causing problems with the fit of clothing, overly large breasts can cause physical symptoms such as painful shoulders or neck, often because of excess weight borne by a bra worn to support the breasts. Surgical reduction of breast size is a common request.

The breast is composed mainly of glandular breast tissue and fat (with an overlying skin "envelope"). Often, the majority of the breast volume is composed of fat: in fact, generally the larger the overall breast volume, the higher the percent volume attributable to fat.

Traditional surgical breast reduction is an invasive procedure, usually performed under general anesthesia, in which excess breast tissue (both glandular tissue and fat) is cut out (excised) to reduce the overall volume of the breasts. With reduced internal volume, the overlying skin becomes excessive and a substantial amount of skin must also be excised. The areola (and nipple) must be moved in order to "stay centered." After a prolonged recovery (frequently weeks), the patient is left with breasts that, although still rounded, have lost their natural shape. Where the skin was stitched together there are usually significant scars that may have widened from stretching or become altered in color (hyper- or hypo-pigmented).

No-Scar Breast Reduction

Fortunately, there is a much simpler solution to reducing breasts: liposuction (breast lipo-reduction). Because a significant percentage of the breast volume is due to fat, liposuction can safely remove much of this volume. Dr. Langdon performs breast liposuction much as he does liposuction in other body areas: using only local (tumescent) anesthesia, making tiny skin incisions (no stitches are needed; most incisions heal with no perceptible scarring), and using tiny micro-cannulas (liposuction instruments).

It is recommended that any patients who have not already had a mammogram undergo this study prior to breast surgery of any kind, including minimally invasive procedures such as liposuction. This is because any surgical procedure on the breast can result in calcification, a pattern that can be seen on the mammogram (a type of x-ray image). It is easier for radiologists to "filter out" changes due to calcification if they have a "baseline" mammogram to use as a comparison.

As is done in all liposuction cases, dilute local anesthetic solution is gently injected into the breast to provide anesthesia. Adding the anesthetic is minimally painful and the breast is generally totally numb afterword. The actual liposuction for breast reduction is thus painless. The swelling of the breast from the anesthetic rapidly diminishes; most patients appreciate significantly reduced breast size within the first few days after surgery. Bruising is generally minimal because the local anesthetic solution causes tiny blood vessels to shrink during the liposuction.

Advantages of Breast Lipo-reduction

- Provides significant reduction in breast volume and weight
- Allows for quick recovery with minimal down time
- Uses only safe, gentle local anesthesia
- Requires only tiny skin incisions with little to no scarring
- Retains natural breast shape
- Provides significant lift to sagging breasts

continued on next page

New and Noteworthy

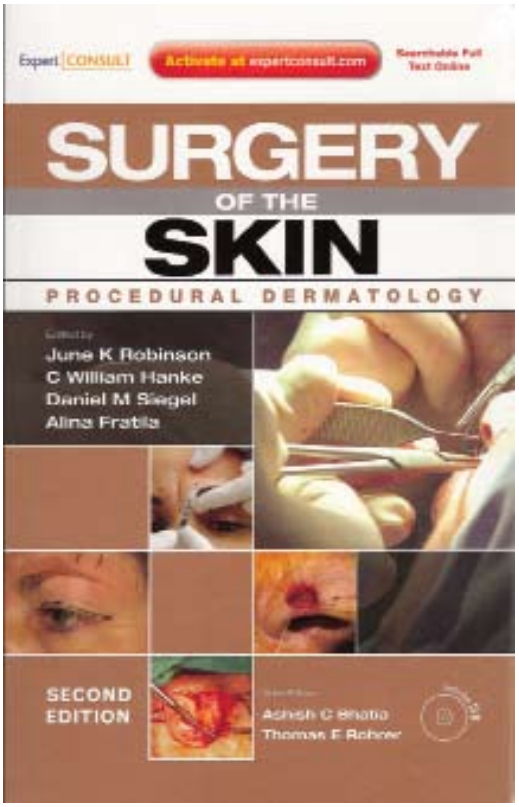
Breast Reduction by Liposuction . . .

continued from page 4

Any residual swelling disappears within a few weeks of the procedure. Most patients rapidly notice reduced symptoms attributable to heavy breasts (such as neck or shoulder strain). Another benefit of reduced breast weight is a significant lift of the unweighted breasts. This lift effect is especially appreciable when viewing "before and after" photographs.

Dr. Langdon Writes Updated Book Chapter on Minimum Incision Facelift

Dr. Langdon has just completed writing an updated chapter on minimum incision facelift for the textbook *Surgery of the Skin*. Dr. Langdon's chapter will be published in the third edition of this comprehensive textbook, which is published by Elsevier, the world's largest publisher of medical books and journals. Dr. Langdon also wrote chapters on this topic in the first two editions of this book, which were published in 2005 and 2010. *Surgery of the Skin* is a textbook written for surgeons. The chapters are detailed descriptions of surgical techniques including diagrams and intra-operative photographs. Also included (on DVD) are intra-operative videos portraying actual surgical procedures.



Langdon Center Achieves AAAHC Accreditation

The Langdon Center for Laser and Cosmetic Surgery has achieved accreditation from the Accreditation Association for Ambulatory Health Care (AAAHC). Accreditation distinguishes The Langdon Center from most other plastic surgery and cosmetic dermatology practices. Status as an accredited organization means that The Langdon Center has met nationally recognized standards for the provision of quality health care set by the AAAHC. Not all ambulatory health care organizations seek accreditation; not all that undergo the rigorous on-site survey process are granted accreditation.

"Whether a patient is seeking a minimally-invasive skin rejuvenation treatment, such as BOTOX® or Juvéderm®, or a cosmetic surgery procedure like brow lift, facelift or laser liposuction, we strive for the highest level of care possible," said Dr. Langdon. "Achieving AAAHC accreditation was very important to myself and my team and is a validation of our efforts to maintain the highest standards of quality."

Founded in 1979, the Accreditation Association for Ambulatory Health Care is the leading organization that certifies quality standards for ambulatory health care facilities in the United States. The AAAHC advocates for high-quality health care through the development of nationally recognized standards and through its on-site survey and accreditation programs. The Association accredits the outpatient health care facilities of many hospitals and academic organizations as well as outpatient surgical centers.

In seeking accreditation by the AAAHC, The Langdon Center underwent extensive assessment and on-site review by AAAHC expert surveyors who are actively involved in ambulatory health care. These surveys compare the organization's procedures with industry best practices.

Dr. Langdon is proud to have the recognition provided by AAAHC accreditation. "When you see our certificate of accreditation, you will know that AAAHC, an independent, not-for-profit organization, has closely examined our facility and all of our procedures and has given The Langdon Center their imprimatur," he said.

Download The Langdon Center App "TLC Aesthetics" to Earn Rewards.

The TLC Aesthetics app for iPhone and Android includes KISS Rewards—our valuable loyalty program for our favorite patients! After just two visits to The Langdon Center (with a minimum purchase of $300 toward treatments or services per visit), you will earn a $150 gift card toward your next aesthetic treatment at TLC! There's a great way to share rewards, too. From right within the app, you can give each of your friends and family members (who are not already patients of Dr. Langdon) an instant $50 gift card!

To download the TLC Aesthetics app, go to the App Store or to Google Play and search for "robertlangdon" (one word).

The Looking and Feeling Your Best newsletter is published for valued patients and guests of Robert C. Langdon, MD. For subscription information please contact our office: 5 Durham Road, Guilford, CT 06437, (203) 453-8625. Any portion of this newsletter may be reproduced or cited if full contact information is listed.

New and Noteworthy

To Learn More . . .

Information about our services is available online:

www.langdoncenter.com

We encourage you to visit our recently revised website for comprehensive information about many of the procedures offered at The Langdon Center. You can join our email list to receive our monthly eNewsletter, which provides timely updates on events at the Langdon Center and announcements of special "online only" discounts on products and procedures.

There are also links to Dr. Langdon's blog featuring up-to-date commentary on topics related to laser and cosmetic surgery, special resource articles by Dr. Langdon, and PDFs of all recent editions of our print newsletter "Looking and Feeling Your Best," which include in-depth articles about Dr. Langdon's procedures. Our home page also has links to our Facebook, Twitter, and Google Plus pages.

What's Inside . . .

The Langdon Center
for Laser & Cosmetic Surgery
5 Durham Road
Guilford, CT 06437

Presorted
Standard
U.S. Postage
PAID
New Haven, CT
Permit #1411