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## Liposuction

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A new and still somewhat controversial treatment for lymphedema has emerged from Sweden. Head of the lymphedema unit in the department of plastic and reconstructive surgery at Malmo University Hospital, Dr. Hakan Brorson reports that in the 70 lymphedema patients he treated with this method said that his patients had complete reduction of swelling with no recurrence.

Despite that he does recommend to patients that they continue therapy which includes wearing controlled compression bandages.

Candidates for the procedure are person with severe arm lymphedema with no pitting and who have been non responsive to other therapies.

Its controversial because of the fact he makes 15 to 20 small incisions on the arm. Of course this type of invasive procedure opens the arm up to be at high risk for an infectious complication. He also has reported that there have been no such occurrences.

The information provided on this page is neither an endorsement of or a statement against the use of liposuction for the treatment of lymphedema. It is presented as education for the lymphedema patient.

Please read and consider carefully all the information before you make any decision and attempt this treatment.

### Pat

As of our update of January 11, 2012, there have been no further studies to clinically confirm the long term safety of liposuction for lymphedema. I remain skeptical therefore to using it. The short term results may still not be worth the long term risks. Plus, it is evident that even though one has liposuction, you will still need to wear the compression garment for the remainder of your life. So, my question is, "What exactly was gained?"

We need follow up studies for ten, twelve or even fifteen years.

Finally, I did run across this interesting comment by a Board Certified Seattle Plastic Surgeon on the use of liposuction for lymphedema. In a question and answer forum (RealSelf [<http://www.realself.com/question/will-liposuction-help-or-aggravate-upper-arm-lymphedema>]) he states: "This is not a good idea. Twenty (20) years ago, a plastic surgeon I was training with did studies on the treatment of lymphedema with liposuction. Early successes were just from fluid removal. The hope was that scar tissue would inhibit the recurrence of the edema but that did not happen. This plus the difficulty fighting infection in the face of lymphedema make liposuction in this setting not a good idea."

Another doctor in the same forum states: "This is a tough question. My general inclination is to discourage the use of this technique for this problem. Lymphedematous arms are more prone to infection and poor wound healing due to increased tissue fluids and impaired oxygen diffusion through the tissues. However, I am aware, as no doubtedly you are, that there are reports of improvement with this modality. If you are considering this, I would highly recommend a specialist who has vast experience in treating patients. At the very..."

There were two other doctors who made the same comments of NOT DOING it in this forum. This makes four against and none recommending liposuction on a lymphedematous limb.

## Liposuction Questions and Answers

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## NATIONAL LYMPHEDEMA NETWORK

Q: Recently I read an article in the NY Post about liposuction for lymphedema in the arm after Breast cancer surgery. As you can imagine, after living with this condition for many years, I was very excited, but not sure where to get further information. Is it true that liposuction can reverse and cure the swelling in my arm? Where can I go for surgery? My doctor was not able to help me. Anxious to hear from you, a long time NLN Member.

A: Liposuction is not a cure for lymphedema. At the present time, there is NO cure for lymphedema. The information you read about refers to a procedure done in Sweden by a Dr. Brorson. He presented this information at the NLN Conference in Orlando this year. He was clear throughout his presentation that he only performs this procedure on long standing, fibrotic [[http://www.lymphedemapeople.com/thesite/lymphedema\\_fibrosis.htm](http://www.lymphedemapeople.com/thesite/lymphedema_fibrosis.htm)], post-mastectomy lymphedema of the arm.

Dr. Brorson emphasized that CDT (combined decongestive therapy), which consists of manual lymph drainage, compression bandaging, skin care, exercise, and self care instruction is still the treatment of choice for lymphedema. He only recommends this liposuction procedure to individuals who could not receive treatment and have developed severe, long-standing, fibrotic lymphedema. He emphasized that after this procedure, the individual must wear compression garments daily and compression bandages [[http://www.lymphedemapeople.com/thesite/lymphedema\\_and\\_bandaging\\_bandages.htm](http://www.lymphedemapeople.com/thesite/lymphedema_and_bandaging_bandages.htm)] nightly, forever. The procedure does not correct the inadequate lymph drainage. It removes large amounts of fibrous tissue from the limb, and necessitates a lengthy operation with extensive scarring.

While it may indeed reduce the overall girth of a very large, fibrotic limb a bit more than a course of CDT by virtue of the fact that the surgeon removes large amounts of subcutaneous tissue, the success of the follow-up home program for both therapies is determined by the compliance of the patient with wearing constant compression on the involved limb and doing the recommended exercise/self-massage program. After the surgery, if an individual decides s/he no longer wants to wear the compression garments/bandages, the limb is at extreme risk of swelling and ballooning out of shape due to the removal of the connective tissue structure of the limb with the liposuction.

This procedure is not without significant surgical risks posed by anesthesia, risk of fat emboli, and risk of post operative wound infection (in a limb with an impaired immune system due to lymph node dissection/radiation therapy). It is distressing to think that a medical insurance plan would probably be willing to pay large fees for liposuction as a "surgical correction for lymphedema" while possibly denying payment for the safer, less expensive course of CDT. Dr. Brorson was the first to say that his first recommendation to an individual with lymphedema post mastectomy, is a course of CDT. Too bad that the reporters who attended the NLN conference chose only to highlight this radical surgical approach to advanced lymphedema. Too bad they missed an opportunity to educate the public about CDT which is safe, non-invasive, and very successful in reducing and managing lymphedema, which to date, has no cure.

## Liposuction to ease surgery side-effect

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A technique associated more with the beauty industry is being used to help women with a disabling side-effect of breast cancer surgery.

Liposuction is usually employed to remove excess fat from the stomach or thighs, but a Swedish surgeon, Haken Brorson, is tackling a condition called lymphoedema.

However, a UK support group believes that the technique may hold dangers for the patient.

The lymphatic system is a circulatory system which redistributes excess fluids and dead cells around the body. Women whose cancer requires the removal of lymph glands in the armpits – which can harbour cancer cells – can find the flow of lymph is disrupted.

This can cause, in some cases, an increase in the volume of fatty tissue in the arm, which is not only visually unappealing, but causes pain and lack of mobility.

## Two litres removed

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Between 30% and 40% of breast surgery and radiotherapy patients are affected to some degree by lymphoedema. Dr Brorson is experimenting with a variation on the standard liposuction technique, which makes approximately 20 incisions along the affected arm and uses suction to remove the fatty tissue and lymph. However, patients must then wear an elasticated compression bandage more or less permanently to stop the lymphoedema coming back.

Dr. Brorson told the European Breast Cancer Conference in Brussels that he had operated on 64 patients, removing, on average, two litres of fat from the arms of the patients.

On average, the swelling was reduced by three quarters within a fortnight, and completely within a year. Dr Brorson told the delegates: "It can change patients' lives – I shall always remember one of my patients telling me how much it meant to her to be able to walk into a shop and for the first time in many years choose a dress, confident that it would fit her and look good on her."

Lymphoedema was described as a "Cinderella" condition by Mrs Gloria Freilich, co-chairman of the conference. "Commonly, patients are told that nothing much can be done to help them and that they should be grateful that they have been 'cured' of cancer," she said.

"They are frequently given inappropriate advice as being told to buy a mechanical pump for the arm. "Used without profession supervision this can actually cause immense further damage."

However, a spokesman for the Lymphoedema Support Network in the UK said that she would be surprised if liposuction could become a regular treatment for the condition, mainly because of the risks of infection.

<http://news.bbc.co.uk/1/hi/health/945360.stm> [<http://news.bbc.co.uk/1/hi/health/945360.stm>]

## Lymphedema caused by Liposuction

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Dear Editor,

Hi, my name is Lillian Newman. My friend Denise told me about your newsletter. I want to let you know about what happened to me in hopes that it'll save other women from the same fate.

In December of 1998 I underwent bilateral ultrasonic upper arm liposuction in a local hospital, performed by a board certified plastic surgeon. I had acute hand swelling 3 days post surgery. Then mild swelling, which got worse after a ride on an airplane over the summer of 1999. I was diagnosed with lymphedema 4/19/2000. Why did it take so long?

Lymphedema is not something that a lot of doctors really know about or pay attention to, unfortunately. This I have found out the hard way. Doctors are also difficult to talk to. They don't want to talk to you because they view you as a walking lawsuit. Three have made comments on my case, two have put them in writing. The first is a vascular surgeon who confirmed the primary physician diagnosis. He stated in the letter he wrote to my primary physician that this lymphedema was a direct complication of the liposuction I had had. This was lukewarmly confirmed by a tightlipped vascular surgeon #2. Two plastic surgeons have commented on my case, but have not seen me. Both are against ultrasonic liposuction because of the potential of it to burn the vascular system.

Beware. They say ultrasonic liposuction is safe. If it was truly safe, I would not have stage one lymphedema. My husband and I had to purchase a Lympha Press edema pump, and I hook myself up to it nightly, after which I perform manual lymph drainage on myself. Three times a week, I am going to physical therapy where the therapist is, shooting against the odds, trying to build collateral vessels in my arms. From now on, when I board airplanes, I will have to take antibiotics and wrap both arms. A cut or a burn could land me in the hospital.

Please help me spread the word. I have a documented case of lymphedema from ultrasonic liposuction and I want people to know. I don't want others to get hurt, though I have already found three victims other than myself on the internet. One woman has stage 3 lymphedema from her liposuction 15 years ago and is so sick that lymph leaks through her skin.

Something must be done to stop the growing and DANGEROUS trend of doctors setting up shop and doing plastic surgery. People have died, people have been seriously hurt. I am one of them. I will have this cardiovascular condition for the rest of my life.

Sincerely,

Lillian Newman

<http://www.wapd.org/news/000604.html> [<http://www.wapd.org/news/000604.html>]

## **Contraindications: Liposuction**

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**Contraindications:** Liposuction is reserved for patients who are healthy and without significant illnesses. Although difficult to determine absolute contraindications, the authors believe that significant medical history should necessitate discussion with the patient's primary physician and/or anesthesiologist prior to approval of any procedure. Anticoagulants (including aspirin) should be stopped 2 weeks prior to surgery to avoid risks of hematoma and excessive bleeding. Physicians must be particularly attentive to herbal supplements that may affect anesthetic risks and bleeding. Obviously, patients who are unable to stop these medicines should not be considered for surgery, as in patients with cardiac valve replacement, atrial fibrillation, and those undergoing deep vein thrombosis and/or pulmonary embolism therapy.

Patients also must understand and discuss at length with the physician the potential risks and sequelae. The physician. Surgeons also should document all discussions with the patient regarding the potential surgery and potential risks. Port site scars also should be appreciated by the patient and occasionally can be modified to address specific needs of the patient.

For entire emedicine article on Liposuction click on the link below

<http://www.emedicine.com/plastic/topic486.htm> [<http://www.emedicine.com/plastic/topic486.htm>]

## **Seromas after liposuction**

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### **What causes the seromas associated with liposuction?**

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Seromas after liposuction are the result of surgical trauma which injures or destroys the lymphatic vessels within the targeted fatty tissue. Lymphatic vessels are tiny, thin-walled tubular structures located throughout the body, and have the specific function of draining tissues of fluids that leak out of capillary blood vessels. Excessively large liposuction cannulas not only create large empty pockets within targeted fatty tissues, but also remove lymphatic vessels. Both of these conditions encourage the formation of seromas after liposuction. Unfortunately, seromas are a common problem after ultrasonic assisted liposuction (UAL). Ultrasonic liposuction cannulas create a considerable amount of heat which injures blood vessels as well as the delicate lymphatic vessels. Without lymphatic vessels to drain away excessive lymph fluid, the fluid collects within the excavated spaces in the fatty created by the liposuction process.

### **How can seromas be prevented?**

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Seromas are prevented by 1) avoiding excessive surgical trauma to the delicate lymphatic vessels within fat,

and 2) by encouraging post-operative drainage of lymph fluid (serum) from the fatty tissues treated by liposuction.

First, the use of microcannulas can reduce the risk of seromas. Micro-cannulas are relatively small liposuction cannulas having an outside diameter less than 3 millimeters. By making relatively small tunnels within the targeted fat, micro-cannulas do not create large empty cavities within which a seroma can form as readily as larger cannulas. Large cannulas remove fat more rapidly, but more likely to cause seromas because large cannulas tend to damage lymphatic vessels, and create larger cavities within the fat.

Second, when incisions are closed with stitches, a relatively large amount of fluid is trapped under the skin where it collects and stagnates in the tunnels within the fat, thus causing a seroma. By not closing incisions with stitches (the "open-drainage" technique) and by using efficient compression garments, the drainage of blood tinged tumescent anesthetic solution and the lymphatic exudates is encouraged. Compression garments squeeze the walls of the empty tunnels together, which encourages the tunnel walls to adhere and grow together thereby obliterating the empty cavities in which seromas tend to form.

## **Liposuction Information**

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### **Liposuction Defined**

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Liposuction is defined as the removal of fat from deposits beneath the skin using a hollow stainless steel tube (called a cannula) with the assistance of a powerful vacuum. Liposuction can be accomplished either with the use of general anesthesia, or with heavy IV sedation, or totally by local anesthesia. This web site considers both the benefits and the potential dangers of local anesthesia and of systemic anesthesia.

### **Tumescent Liposuction**

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Tumescent liposuction refers to a technique that uses large volumes of very dilute local anesthesia that is injected into the fat causing the targeted areas to become tumescent, or swollen and firm. Local anesthesia is widely regarded as the safest form of anesthesia. Because local anesthesia persists for many hours there is no need for narcotic pain medications after surgery.

### **Modified Tumescent Liposuction**

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Modified tumescent liposuction refers to a combination of tumescent local anesthesia plus some form of systemic anesthesia (general anesthesia or heavy IV sedation). Because general anesthesia or heavy IV sedation can be dangerous, they must be administered by an anesthesiologist.

### **The Different Liposuction Techniques**

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There are many ways to do liposuction, for example liposuction can be accomplished painlessly either totally by local anesthesia or with general anesthesia. In the realm of liposuction, maximum speed and maximum volume of aspirate are not criteria for excellence. Ultimately, excellence is measured in terms of patient happiness which is a function of safety, patient comfort, finesse, and quality of results. The important distinction between liposuction surgeons who are board certified is the liposuction technique that they use. The surgeon's specialty is not as important as the surgeon's technique, experience and attitude toward safety.

### **Liposuction Complications**

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Liposuction complications are often the direct result of lack of caution, poor judgment, over confidence, ignorance about pharmacology, or adherence to faulty dogma. This web site discusses these traits, and explains how to reduce the risk of liposuction surgical complications.

## The "Art of Liposuction"

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Liposuction is a medium of artistic expression that displays itself in (1) a practical application of scientific knowledge, (2) the production of what is beautiful, (3) a perfection of workmanship, (4) a perpetual quest for improvement in technique, and (5) a skill attained through clinical experience, and above all (6) making people feel happy about what they see in the mirror.

## Artistry and Safety are Related

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This web site asserts that artistry and safety depend on each other. The word "art" implies skill and mastery of a technique. In order to master an artistic liposuction technique, the surgeon must have the skill and intelligence to avoid exposing patients to unnecessary dangers. The true artist provides better results, and uses the safest technique and never forgets the duty to "first, do no harm." For example, even if a patient wants to have a large volume of liposuction accomplished in one session, the artist convinces the patient that serial liposuction procedures are safer and ultimately yield better results. It is not artistry to take unnecessary risks or push liposuction to the limits of safety.

## Risks of Liposuction

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Risks of Liposuction must be well understood by all prospective liposuction patients. This web site emphasizes the need to constantly be aware of safety issues. In order to minimize the risk of liposuction, the patient must be aware of the following facts:

Too much liposuction is an excessive volume of aspirated fat, or an excessive number of areas treated. Excessive surgical trauma (excessive liposuction) is dangerous and is an important cause for serious liposuction complications.

Unrelated surgical procedures on the same day as liposuction are unnecessary. Prolonged exposure to anesthesia is dangerous and is an important cause for serious liposuction complications.

Disfiguring skin irregularities and depressions are frequently the result of the surgeon's inattention to detail. For example, if a liposuction surgeon attempts to do too much on a single day, and becomes fatigued, the result may be an inattention to detail, and undesirable cosmetic results. A liposuction cannula is a stainless steel tube inserted through an incision in the skin that is employed to suction the fat. The size of the liposuction cannula can influence the smoothness of the skin after liposuction. The use of large cannulas tend to create irregularities more commonly than microcannulas (outside diameter less than 3 millimeters). Surgeons who do total-body liposuction tend to use larger cannulas.

## Tumescent Technique is Safest

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The tumescent technique for liposuction is unquestionably the safest form of liposuction. When tumescent liposuction is done correctly (not excessively), it is a very safe procedure. For example, there have been no reported deaths associated with tumescent liposuction totally by local anesthesia. Even when general anesthesia is combined with the tumescent technique, liposuction is quite safe provided the volume of fat removed and the number of areas treated during a single surgery is not excessive. The dilute epinephrine contained in the tumescent anesthetic solution profoundly shrinks capillaries and thus virtually eliminates surgical blood loss.

## Smoother Cosmetic Results

The tumescent technique permits the use of microcannulas which in turn yields smoother cosmetic results. Traditional liposuction cannulas (stainless steel tubes) have a relatively large diameter and remove fat rather quickly. However, with the use of large cannulas (diameter greater than 3 millimeters) there is an increased risk of irregularities and depressions in the skin. Microcannulas with a diameter less than 3 millimeters, allow fat to be removed in a smoother and more uniform fashion. Some surgeons prefer larger cannulas because it allows liposuction to be done more quickly.

## Rapid Healing

After tumescent liposuction, there is a certain amount of blood-tinged local anesthetic solution that remains under the skin. This excess fluid is either slowly absorbed over several weeks into the blood stream, or it can be rapidly removed by drainage through skin incisions and absorbed by special absorptive pads (HK Pads).

## Rapid Drainage

Rapid drainage of blood-tinged anesthetic solution out of incision sites, accelerates the rate of healing, and reduces post-operative pain swelling, and bruising. Post-liposuction drainage of blood-tinged anesthetic solution can be maximized by 1) leaving incision sites open and not closed with sutures, 2) placing several adits (1.5 mm tiny round holes) in the skin to encourage drainage, 3) placing HK Pads on the skin to absorb the drainage, and 4) wearing spandex compression garments to encourage drainage.

Liposuction Information [<http://www.liposuction.com/lipoinfo/intro.php>] Liposuction.com

## Liposuction Risks and Complications

### List of possible complications:

Abnormal body contour Anesthesia reaction Bleeding Burning Death (approximately 1 in 10,000) Depression (mild depression is normally following elective surgery) Dimples Discoloration DVT (Blood Clot) Fat Embolus (less than 0.1%) Heart Failure Hematoma Hypothermia Infection Keloid (heavy scar) Nerve damage Perforation of bowel or abdominal wall Permanent numbness (risk is less than 1%) Puckers Reactions to medications Seroma (fluid collection under skin) Shock Skin irregularities Skin death (necrosis) Slow healing Swelling Tingling Visible scar

Deaths related to liposuction surgery can happen for a number of reasons: blood clot, perforation of the abdominal wall or bowels, shock and hemodilution (blood dilution), and possibly excess amounts of lidocaine.

### Blood Clots

Blood clots (or deep venous thrombosis, a DVT) can form in the deep veins of the pelvis or legs after any surgery. A blood clot forms after prolonged immobility (people on international flights, women on bedrest during pregnancy and patients recovering from surgery are the most susceptible to blood clots). It is important to stand often (at least once an hour), flex the feet more often and generally keep the blood flowing in your legs. If the blood pools for too long in one area, you could be at risk for a blood clot.

## Perforation

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Perforation of the abdominal wall or bowels is preventable during surgery. Surgeons are limited in what they can see during surgery and must take extra caution. Choosing an highly experienced surgeon can reduce your risk of such complications.

## Shock and hemodilution

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Shock and blood dilution can occur after a patient has had excessive amounts of fluid injected and then excessive amounts of fat and body fluid removed (over 5,000 cc's, about 11 pounds). Large volume liposuction should be considered carefully. It is generally not recommended. However there are surgeons that specialize in it (See Reuters Health article).

## Lidocaine

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Lidocaine use poses particular hazards, especially since experts do not agree on safe injectable levels. At least one study links possible lidocaine toxicity to liposuction deaths. People with less than normal liver function or those who have been drinking alcohol may not be able to metabolize lidocaine well.

According to the FDA, a survey conducted by the American Society of Plastic Surgeons (ASPS) of more than 1,500 plastic and reconstructive surgeons in January 1999, there was an unexpected high death rate of one in every 5,000 (or 20 out of 100,000) liposuction patients between 1994 and 1998. These high numbers may be due to an increase in unqualified surgeons performing liposuction during that period. Since 1995, the number of deaths related to liposuction have decreased dramatically, to around 1 in 100,000 (approximately 25 deaths out of 250,000 liposuction procedures per year).

A study published in the scientific journal, *Dermatologic Surgery*, shows that office-based liposuction may be significantly safer than hospital-based liposuction. No deaths were reported by dermatologists performing approximately 300,000 procedures from 1995 – 2000.

A review of malpractice claims from the Physicians Insurance Association of America (PIAA) showed that of the 257 claims filed from January 1, 1995 through December 31, 1997, less than 1 percent were against dermatologists even though dermatologic surgeons perform more than one-third of the liposuction procedures in the United States. In addition, 89% of claims were against plastic surgeons, with patients undergoing liposuction in a hospital setting accounting for 71% of malpractice claims.

According to statistics from their respective professional organizations, dermatologic surgeons currently perform about 100,000 liposuctions annually, with plastic surgeons accounting for more than 170,000 fat removal procedures per year. "Our study found that liposuction is safest when it is performed as a solo procedure under local (tumescent) anesthesia in an outpatient setting by a board-certified dermatologic surgeon. In fact, our data shows that there have been no deaths from liposuction by dermatologic surgeons." William P. Coleman, III, MD, president of the American Society for Dermatologic Surgery.

According to Dr. Coleman, more risks are associated with:

- Extracting large amounts of fat
- Using general anesthesia in a hospital setting
- Performing multiple procedures during the same surgery

The PIAA study confirmed that patients who had liposuction performed under local anesthesia using the tumescent technique had no fatalities and fewer complications.

Source: [http://www.asds-net.org/lipo\\_safety.html](http://www.asds-net.org/lipo_safety.html) [[http://www.asds-net.org/lipo\\_safety.html](http://www.asds-net.org/lipo_safety.html)]

According to a study by the ASPS Liposuction Task Force, released in October 1998, the rate of significant complications from liposuction is low. The Task Force reviewed 24,295 liposuction surgeries performed by board-certified plastic surgeons for the study and found that only .03 percent reported significant complications.

Factors that increase the risk of complications include: large volume liposuction, because of the use of greater amounts of fluid and anesthesia, as well as removal of more fat; extended length of surgery; multiple procedures; or a patient whose preoperative health is compromised.

Source: <http://www.plasticsurgery.org/mediactr/homework.htm> [<http://www.plasticsurgery.org/mediactr/homework.htm>]

In 1997 board certified plastic surgeons formed a task force to investigate liposuction safety. Their research led to increased efforts by ASAPS and other plastic surgery organizations to re-educate plastic surgeons about risk reduction in lipoplasty procedures. Several measures were identified as ways to increase patient safety, including: 1) using stricter patient selection criteria, 2) limiting the length of surgery, 3) avoiding pre-injection of excessive amounts of fluid and local anesthetic, 4) removing a smaller volume of fat, 5) avoiding the combination of liposuction and certain other procedures, and 6) careful postoperative monitoring.

Beginning in mid-1998, the safety record of lipoplasty performed by board-certified plastic surgeons appears to have improved dramatically. In May 2001, a major survey on lipoplasty safety was published in *Aesthetic Surgery Journal*, the peer-reviewed journal of the American Society for Aesthetic Plastic Surgery. The survey, covering many thousands of lipoplasty procedures performed by ASAPS members from September 1998 through August 2000, showed that the risk of death from lipoplasty performed as an isolated procedure (not in combination with any other surgeries) was 1 per 47,415 procedures, a nearly 10-fold decrease from rates suggested by earlier published surveys.

Source: <http://www.surgery.org> [<http://www.surgery.org>] Surgical scars are permanent. However, usually only two small incisions (less than 1/4") are made for each area. Incisions are often placed in natural skin creases, are hidden in pubic hair, or inside the belly button so that they are not normally noticeable except on very close observation. Certain areas are easier to hid then others.

To keep scar tissue soft and minimize their appearance, massage them and keep them out of the sun. Massage them with scar minimizing/reduction creams such as Mederma.

## Scars by area

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Abdomen: at the belly button, bikini line, each side of the abdomen Arms: along the arm Breasts: in the breast crease (under the breast) Chin: under the chin and behind each ear Knees: usually two tiny incisions per knee, in skin creases Thighs: depends on fat location, usually on the edge of suctioned area Smart Liposuction [<http://www.smartliposuction.com/risks.html>]

## Abstracts and Studies

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**From lymph to fat: complete reduction of lymphotoedema.** Oct. 2010

Brorson H.

Source

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## Key Words

lymphedema, lymphoedema, liposuction, adipose tissue, controlled compression, therapy lipectomy

## Abstract

Liposuction for late-stage lymphoedema remains a controversial technique. While it is clear that conservative therapies such as combined decongestive therapy (CDT) and controlled compression therapy (CCT) should be tried in the first instance, options for the treatment of late-stage lymphoedema that is not responding to treatment is not so clear. Liposuction has been used for many years to treat lipodystrophy. Some results have been far from optimal; however, improvements in technique, patient preparation and patient follow-up have led to a greater and a wider acceptance of liposuction as a treatment for lymphoedema. This paper outlines the benefits of using liposuction and presents the evidence to support its use.

Full Text:

Phlebology [[http://phleb.rsmjournals.com/content/25/suppl\\_1/52.long](http://phleb.rsmjournals.com/content/25/suppl_1/52.long)]

Safety of tumescent liposuction under local anesthesia in a series of 4,380 patients. [<http://content.karger.com/produktedb/produkte.asp?DOI=000327375&typ=pdf>] 2011

**Key Words:** Liposuction, Tumescent liposuction, safety, Local anesthesia

## Lymphedema People Internal Links

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[Lymphedema](#)

[Arm Lymphedema](#)

[Leg Lymphedema](#)

[Treatment](#)

[Compression Pumps for Lymphedema Treatment](#)

[Diuretics are not for lymphedema](#)

[Manual lymphatic drainage mld complex decongestive therapy cdt](#)

[Lipedema](#)

## External Links

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Tumescent Liposuction [<http://www.health.state.mn.us/htac/lipo.htm>]

THINGS TO KNOW ABOUT LIPOSUCTION [[http://www.liposuction.com/faqs/postop\\_recovery.php](http://www.liposuction.com/faqs/postop_recovery.php)]

Liposuction gives complete reduction of chronic large arm lymphedema after breast cancer. [[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10987239&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10987239&dopt=Abstract)]

Swedish Doctor Uses Liposuction [<http://www.annieappleseedproject.org/sweddocuslip.html>]

Swedish Physician Uses Liposuction to Help Treat Lymphedema (dateline April 20, 2001) [<http://imaginis.com/breasthealth/news/news4.20.01.asp>]

Liposuction Reduces Arm Lymphedema Without Significantly Altering the Already Impaired Lymph Transport [<http://www.u.arizona.edu/~witte/contents/1998.4.brbrson.pdf>]

Liposuction Treatment of Lymphedema [[http://w1.706.telia.com/~u70626613/Index\\_eng.html](http://w1.706.telia.com/~u70626613/Index_eng.html)]

Liposuction in arm lymphedema treatment. [[http://www.ncbi.nlm.nih.gov/sites/entrez?cmd=Retrieve&db=PubMed&list\\_uids=14758919&dopt=AbstractPlus](http://www.ncbi.nlm.nih.gov/sites/entrez?cmd=Retrieve&db=PubMed&list_uids=14758919&dopt=AbstractPlus)]

Tissue tonometry before and after liposuction of arm lymphedema following breast cancer [<http://www.liebertonline.com/doi/abs/10.1089/lrb.2005.3.66>]

Quality of life following liposuction and conservative treatment of arm lymphedema. [[http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=ShowDetailView&TermToSearch=16724506&ordinalpos=1&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed\\_ResultsPanel.Pubmed\\_RVAbstractPlus](http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=ShowDetailView&TermToSearch=16724506&ordinalpos=1&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVAbstractPlus)]

Liposuction and the Consensus Document: Response to Prof. M. Foldi's Remarks at the 19th International Congress of Lymphology [<http://www.u.arizona.edu/~witte/contents/Brorson%20Comment.pdf>]

Lipoinfo.com [<http://www.lipoinfo.com/>]

## **Lymphedema People Resources**

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Updated Jan. 11, 2012

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