Arm lift (brachioplasty)

Introduction
An arm lift or brachioplasty removes excess skin and fat, reshaping the upper arm area while reducing its circumference. This operation can be combined with a number of other procedures to reshape the upper chest and back area. In most cases, people losing a massive amount of weight will have excess skin in both the upper and lower trunk areas, including the arms.

During your consultation with Dr. Beldholm you will receive a full assessment of what procedures are possible for your body type and what results you can expect. As well as enhancing your arms, a carefully planned brachioplasty procedure will improve your ability to fit into clothing and increase your general comfort level. Please note that some patients may require only liposuction for a good result – a procedure leaving only minimal scars that are usually well-hidden. For those requiring an arm lift, Dr Beldholm will conceal the scar on the inside of the arm.

What is an arm lift?
Although sagging skin in the upper arm is usually caused by weight loss, skin also loses elasticity through the natural ageing process. In fact, many people find their arms, in particular, lose firmness as the layers of muscle and supporting fat become thinner. This saggy appearance is sometimes referred to as ‘bat wing’ deformity. In such cases, an arm lift can help to restore and tighten these areas, giving a much firmer, youthful look, particularly in sleeveless tops and dresses.

Procedures that can help reshape the arm range from liposuction and mini-arm lifts to traditional and extended arm lifts.

Early arm lifts were done with simple, short elliptical excisions that achieved only fair outcomes. The results began to improve when more emphasis was placed on the upper to middle arm. Research followed that demonstrated the importance of deep closure to improve the final scar and make the results smoother and tighter. Finally, liposuction was added to the equation to enhance the outcomes. Today, the modern techniques are much safer while providing better results.

Who can benefit from this procedure?
The degree of skin laxity in your arms will determine whether you may be a suitable candidate for any of the arm contouring operations. During your consultation with Dr. Beldholm you will be provided with a good idea of what is possible and what to expect.

You may not be suitable for an arm lift procedure if you suffer any of the following conditions:

- Serious neurological or vascular conditions of the arm.
- Previous axillary lymph node dissection.
- Lymphoedema of the arm.
- Symptomatic Raynaud’s disease.
- Connective tissue disorders.
- Advanced rheumatoid arthritis.

Patients with unrealistic expectations may also be unsuitable for this procedure.
**Surgical techniques and results**

**Liposuction**
Liposuction is a procedure designed to remove fat from areas such as the arms, neck, chest, abdomen, thighs, buttocks and legs. In fact virtually any part of the body is suitable for this suction-assisted procedure that focuses on creating a very attractive appearance, rather than simply reducing fat or flab.

Liposuction achieves the best results for:
- Younger patients who are in good health.
- Those wishing to lose excess fat (such as people who, following a diet and exercise regime, have found that about 10 to 15 kilograms of excess weight remains in certain pockets of their bodies).

Please note that liposuction is not a good alternative to dieting or exercise. Consequently, very overweight people who are unable to lose weight are not suitable candidates. Liposuction is also not suitable for older people as their skin is less elastic and unable to firmly tighten.

**Limited arm lift**
This procedure, in which a surgical incision is made in the armpit, is only suitable for patients with limited skin laxity. To maximise results, liposuction may be combined with this operation.

**Full arm lift**
The most suitable procedure for patients aged over 50, this operation is also sometimes performed on those who are left with large areas of unwanted skin as a result of massive weight loss. When combined with liposuction, this operation generally takes about three hours. Due to the extent of surgery required, scars on the underarm will run from the armpit to elbow.

**Extended arm lift**
This procedure is most commonly performed on patients losing massive amounts of weight where excess and sagging skin needs to be removed from both the arm and upper chest areas. In men, an extended arm lift can be combined with an upper body lift to remove sagging skin around the chest area. As such procedures are quite extensive (with the incision extending from the elbow to the chest area), patients need to be mentally prepared for a longer recovery period.

**Effects of surgery and side effects**
With any operation, the larger the procedure, the greater the risk. With arm lifts, the most frequent complications tend to be related to wound breakdown and scars, especially in the larger operations.

A Mayo Clinic study reported that minor complications arose in approximately 25 per cent of arm lift cases. These complications included:
- Fluid collection under the skin (10 percent).
- Poor scarring (10 percent).
- Skin infection abscesses under the skin (2.5 percent).
- Wound separation (7.5 percent).
- Nerve damage (5 percent).
- Prolonged numbness (found in one patient in the study).

None of the patients required operative treatment for these complications.
General risks of arm lifts

As with any surgical procedures, patients can suffer a number of complications unrelated to their specific operations. However, for those who are healthy and do not take any medications, these complications are very rare.

The risks increase for those with a number of health problems and can include:

- Heart problems (although very uncommon with modern anaesthetic techniques).
- Lung problems -- small areas of the lungs may collapse, increasing the risk of chest infection. Such problems may require antibiotics and physiotherapy to correct. Other potential lung complications are quite rare.
- Clots in the legs with pain and swelling. Rarely, part of such a clot may break off and go to the lungs, causing fatal complications.
- Allergic reactions to medications.

Specific risks

Smoking

Patients are advised that smoking before their procedure will increase complication rates threefold.

During an arm lift, a large area under the skin is undermined and the blood supply to the skin depends on blood vessels that are very far from the site of healing. During this procedure, the blood supply to the area being operated on is very reduced -- even in young non-smokers with no health problems.

Nicotine, carbon monoxide, and many other toxic tobacco by-products clearly interfere with the dynamics of normal wound repair and their adverse effects can include:

- Causing direct tissue injury within the microvasculature (network of tiny blood vessels).
- Inhibiting cellular populations involved in propagating healing.
- Producing hormones that actually retard wound repair.
- Reducing blood flow and oxygen delivery to the skin and extremities.
- Necrosis (skin death).

To optimise your surgical results, Dr. Beldholm requests patients stop smoking for four weeks before and four weeks after surgery. These recommendations are based on conclusive medical findings. Nicotine patches or gum should not be used to take the place of cigarettes or cigars as they are also associated with increased complications.

Common complications

Wound infection is perhaps the most common complication. Such infections, which generally respond well to antibiotics, are usually superficial. Although small areas of wound breakdown are sometimes noted, these heal well over a few weeks when the wound is dressed regularly.

Uncommon and rare complications

As with every surgical procedure or operation, there are always risks and, in very extreme cases, fatalities. Generally, the longer the incision and the more skin excised, the larger the risk. Although serious complications of an arm lift are uncommon, they can include:

- Copious bleeding requiring a return to theatre to remove the blood and seal the blood vessels.
- Seroma or excessive fluid build-up under the skin of the operated area. Although this condition may require drainage with a needle, it usually settles down without the need for a further operation.
- Fat necrosis occurs when fat cells lose blood flow and die. The liquefied fat cells can then harden underneath the skin over time, causing lumpiness.
Pain of varying intensity and duration may occur and persist after brachioplasty surgery. Chronic pain occurs very rarely.

 Fluid accumulations (seroma) infrequently occur between the skin and the underlying tissues. If this problem occurs, it may require additional procedures for drainage of the fluid.

 Wound disruption or delayed wound healing is possible. Some areas of the arm may not heal normally and may take a long time to heal, while some areas of skin may die. Such complications may require frequent dressing changes or further surgery to remove the non-healed tissue. Please note that smokers have a greater risk of skin loss and wound healing complications.

 Necrosis (skin death) generally occurs in patients who have not stopped smoking before their operation. With this condition, the skin dies and there is an open wound of variable size. Generally, if this wound is dressed daily, it will heal up in a couple of months, with the final result usually quite acceptable.

 Additional procedures, such as scar revision or further liposuction, may be needed after an arm lift has been performed.

 Loss of sensation in the skin.

 Asymmetry in the appearance of a patient’s arms.

 Chronic pain is a very rare complication after an arm lift.

 There is the possibility of a poor result from an arm lift, such as unacceptable visible deformities, wound disruption or loss of sensation. Infrequently, it is necessary to perform additional surgery to improve the result.

 Nerve injuries. Such injuries can include motor nerves (such as the ulnar nerve) that move the muscles. However, as these nerves are deep, the risk of such injury is fairly minor.

 It is common to experience diminished (or loss of) skin sensation in areas that have had surgery. It is rare to experience permanent changes in sensation in the hands and forearms after brachioplasty. Diminished (or complete loss of skin sensation) may not totally resolve after brachioplasty.

 Skin contour irregularities and depressions may occur after brachioplasty and visible and palpable wrinkling of skin can occur. Residual skin irregularities at the ends of the incisions are always a possibility, as is skin pleating, when there is excessive redundant skin. This may improve with time, or it can be surgically corrected.

 Bruising and swelling normally occur after brachioplasty. The skin in or near the surgical site can appear either lighter or darker than surrounding skin. Although uncommon, swelling (including of the forearms and hands) and skin discoloration may persist for long periods and, in rare situations, may be permanent.

 Itching, tenderness, or exaggerated responses to hot or cold temperatures may occur after surgery. Usually this resolves during healing but, in rare cases, may be chronic.

 After lifting the arm skin, there can be a sensation of tightness in this region but usually this feeling subsides over time, although sometimes additional surgery may be required to correct this problem.

 Most surgical techniques use deep sutures and these may spontaneously poke through the skin, becoming visible or producing irritation that requires removal.

 There is the potential for injury to deeper structures including nerves, blood vessels, muscles, and lungs (pneumothorax) during any surgical procedure. The potential for such complications varies according to the type of procedure being performed. Injury to deeper structures may be temporary or permanent.

 All surgery leaves scars, some more visible than others. Although good wound healing after a surgical procedure is expected, abnormal scars may occur within the skin and deeper tissues. Scars may be unattractive and of different colour than surrounding skin. Scar appearance may also vary within the same scar, exhibiting contour variations and “bunching” due to the amount of excess skin. Scars may also be asymmetrical (having a different appearance between the right and left side of the body). There is also the possibility of visible marks in the skin from sutures. In some cases scars may require surgical revision or treatment.

 Most patients have differences between the right and left side of their body before any surgery is performed. Consequently, brachioplasty may produce an asymmetrical body appearance. Factors such as skin tone, fatty deposits, skeletal prominence and muscle tone can contribute to this normal asymmetry in body features. Additional surgery may be necessary to attempt to improve symmetry.

 Wound disruption or delayed wound healing is possible. Some areas of the arm may not heal normally and may take a long time to heal, while some areas of skin may die. Such complications may require frequent dressing changes or further surgery to remove the non-healed tissue. Please note that smokers have a greater risk of skin loss and wound healing complications.

 Fluid accumulations (seroma) infrequently occur between the skin and the underlying tissues. If this problem occurs, it may require additional procedures for drainage of the fluid.

 Pain of varying intensity and duration may occur and persist after brachioplasty surgery. Chronic pain occurs very infrequently from nerves becoming trapped in scar tissue after this procedure.
Potential complications for patients having liposuction

Specific risks
Although almost all Dr Beldholm’s patients are very happy with their final results, some minor problems can occur. Most of these problems either resolve spontaneously or can be easily treated. Bruising, as well as some swelling and discomfort after the procedure, are very common and not dangerous.

Cosmetic side effects of liposuction
As with any operation, there will be scars, although, in time, these heal to become almost imperceptible. The largest cut will usually be around five millimetres and these incisions will be placed in areas that make them very hard to spot. Sometimes the skin may look bumpy and/or withered because of uneven fat removal or poor skin elasticity. Not all patients heal in the same way and, with older patients, the healing may be slower and a bit imperfect. Sometimes a small touch-up procedure can help. Most of these contour irregularities settle in three to six months.

Uncommon and rare complications
As liposuction is a proper operation, there is always the risk that rare complications may occur. The likelihood of such complications is somewhat increased when treated areas are very large or numerous and in instances where large amounts of fat are removed.

- Poor wound healing (hypertrophic or keloid scar). In these instances, the scar can permanently thicken, turn red, be painful and disfiguring. Usually it takes up to 12 months for a wound to heal and demonstrate the final result. Please be aware that, with Dr Beldholm’s techniques, scars are minimised.
- Any time the body is incised or punctured, bacteria can penetrate and cause an infection. During liposuction, multiple small puncture wounds are made for inserting the cannula. These puncture wounds vary in size, depending upon the technique.
- Damage to the skin. Most surgeons work on the deeper levels of fat, so as to avoid wounding the skin any more than they must for the insertion of the cannula.
- Damage to the tissue beneath the skin from the cannula. A “rash” may show up as a spotted appearance on the skin surface and can be permanent and very difficult to treat.
- Skin necrosis (dead skin) is a rare complication, in which the skin falls off in the affected area. The resulting wound then needs to heal, typically requiring extended wound care.
- Puncture of an internal organ. Since the surgeon can’t see the cannula, sometimes it damages an internal organ, such as the intestines, during abdominal liposuction. Such damage can be corrected surgically although, in rare cases, it can be fatal. As a previous specialist general surgeon, Dr. Beldholm is very aware of the human anatomy and complications of this nature are very rare.
- Lidocaine toxicity. With some techniques, too much saline fluid may be injected, or the fluid may contain too high a concentration of lidocaine. Consequently, the lidocaine may become too much for a patient’s system to handle. Lidocaine poisoning at first causes tingling and numbness and eventually seizures, followed by unconsciousness and respiratory or cardiac arrest. Patients should inform Dr. Beldholm immediately if they experience any of these symptoms.
- Fluid imbalance. Since fat contains a lot of fluid (which is removed during liposuction), and since the surgeon injects fluid for the procedure (possibly a very large amount of it for some techniques), there is a danger of the body’s fluid balance being disturbed, either while in hospital or later at home. If too much fluid remains in the body, the heart, lungs and kidneys could be badly affected. Patients who feel unwell or experience chest pain should call Dr Beldholm immediately for advice.
Before surgery

A well-balanced diet

Dr. Beldholm’s approach to your health is holistic. If you are contemplating elective cosmetic surgery, then the first thing you can do is to opt for a well-balanced, healthy diet. Maintaining such a diet is central to preparing for any type of surgery as proper nutrition will help you heal better and strengthen your immune system, resulting in a faster recovery.

Take one gram of vitamin C and one tablet of bio zinc daily the week before surgery, continuing for one month after surgery to improve wound healing. Do not take vitamin E as it can interfere with blood clotting and lead to haemorrhaging in people undergoing surgery.

Regular Exercise

Regular exercise is helpful in preparing for any surgery and maintaining a healthy lifestyle. Exercising increases metabolic rate and builds muscle mass, thereby reducing the risk of weight gain during the operation recovery time. Aerobic exercise should be a part of any fitness regime as a strong heart promotes a faster immune response, thus speeding up recovery.

Although some medications should be stopped prior to this surgical procedure, it’s important to always check with your GP first.

Four weeks prior to surgery: Stop smoking.

Two weeks prior to surgery: Stop vitamin E intake. Wheat germ, nuts, and vegetable oils containing sunflower, almond and wheat germ have the largest amounts of vitamin E, so avoid these for two weeks prior to surgery.

Seven days prior: Stop taking aspirin, clopidogrel (eg. Plavix, Iscover), dipyridamole (eg Asasantin, Persantin) and NSAIDs (non-steroidal anti-inflammatory drugs). The use of birth control pills, hormone replacement therapy and some forms of post-cancer treatment medication may produce an increased risk of developing dangerous internal blood clots that can, in rare cases, lead to embolism.

Take one gram of vitamin C and one tablet of bio zinc daily the week before surgery and continue for one month after surgery.

Five days prior: Stop taking warfarin medications (Coumadin, Marevan). However, for high risk patients, stopping warfarin can lead to life-threatening blood clots and daily injections with low molecular weight heparin may be required. High risk patients most commonly include those with artificial heart valves or those who have suffered myocardial infarctions. Your GP can advise if you are in the high risk category. Low risk patients stopping warfarin may require no course of action.

One day prior: Stop eating at least six (6) hours before your procedure. However, you may continue drinking water and clear apple juice (and only clear apple juice) up to two (2) hours prior to your procedure.

On the day of your procedure: Shower and wash yourself with mild soap and shampoo your hair. Remove all make-up, taking particular care to remove mascara. Do not use body lotion or face cream. Remove all jewellery and nail polish.

Although valuables are looked after during your procedure, the hospital does not take responsibility for these items, so it’s best to only bring necessities.

Your own medication can be taken with a sip of water on the morning of surgery. However, it’s important to check with Dr Beldholm well before your operation regarding what medications can be taken. Please bring your own medications to the hospital.

What to wear to hospital

On the day of surgery, wear loose-fitting clothes (which do not have to be put on over your head) and low-heel shoes.

Do not wear panty hose or tights. All make-up, nail polish and cosmetics must be removed. As contact lenses cannot be worn in the operating theatre, wear glasses, if necessary. Leave all valuables and jewellery at home. Although you will be provided with a locker for your clothing, the hospital cannot be responsible for any valuables or jewellery misplaced or lost.
After Surgery

Generally, the majority of patients go home on the day of their operation. To ensure that you are well enough to leave hospital, Dr. Beldholm will see you prior to discharge.

YOU MUST NOT DRIVE HOME AFTER YOUR OPERATION. Consequently, it's important to make arrangements well in advance for a responsible driver to take you home. If you are having day surgery and you live more than an hour's drive from the hospital, we recommend you arrange to stay in the general vicinity for your first post-operative night.

While patients are still anaesthetised, Dr. Beldholm administers local anaesthetic into the wound to minimise pain or discomfort on waking. Prior to discharge, you'll also receive pain medication that can be taken at home.

As you are still in the recovery phase of the operation when discharged, it's important to arrange in advance for someone to assist you for the first week following your operation.

All patients are encouraged to walk as soon as possible after their procedures to prevent complications and to ensure blood flow quickly returns to normal. However, vigorous exercise should be avoided.

You will leave the hospital with your arms wrapped in dressings. These dressing will be removed one to two days post-operatively and you will be provided with a sleeve or body suit (depending on your preference and how extensive your surgery was) to put pressure on the area to reduce swelling. This compression garment will be measured up for you prior to your procedure.

Around the house

Recovery takes three to four weeks. Following surgery, your arm will be placed in your special compression garment to help the newly sculpted skin adhere to the underlying tissue. You should wear this garment for three weeks.

There may be thin drains inserted under each arm to collect fluid. These will be removed in two to three days. Although each patient’s recovery is unique, most feel groggy for at least a week. During this time avoid lifting and strenuous movements.

Keep your arm elevated with pillows to minimise discomfort and help reduce swelling. Sutures are usually dissolvable and do not need to be removed. However, if permanent sutures are required, they are generally removed within two weeks.

Swelling and bruising takes about three to six months to disappear. Scars will remain visible although they will continue to fade for up to two years.

Strenuous physical activity should be avoided for four weeks as this can produce bleeding, bruising and increased swelling, as well as putting strain on the closure of the skin, thereby risking wound disruptions.

Return to work

Most patients can return to work after one week. However, if your job involves strenuous physical activity, you will need two to four weeks of recovery time before returning.

Driving

Allow around two weeks of recovery time before driving.