The British Association of Aesthetic Plastic Surgeons

# Abdominal Reduction

This is also called an abdominoplasty or tummy tuck. In this procedure excess skin and fat can be removed, abdominal contours and scars improved, and the muscles tightened. Different combinations are combined in the various procedures.

## The Standard Abdominoplasty

The excess skin and fat of the abdominal wall between the pubic area and the umbilicus (navel) is removed leaving the umbilicus in place. The skin of the abdominal wall at the level of the umbilicus is then drawn down to suture it to at the pubic level. The patient is left with a long, usually curved scar across the lower part of the abdominal wall at the level of the pubic hair. There is also a scar around the umbilicus. Any looseness of the muscles of the abdominal wall or hernia is repaired at the same time - see Fig.1.

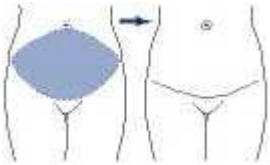

**Fig 1.** *Standard abdominoplasty*

**Fig 2.** *Mini abdomminoplasty*

Liposuction may be carried out during this procedure to thin the abdominal wall, or as a separate procedure either before or after the abdominoplasty.

In the **mini-abdominoplasty** surplus skin below the umbilicus is removed leaving a low abdominal scar at the level of the pubic hair. The umbilicus is not disturbed but liposuction is usually carried out at the same time as the procedure to reduce the thickness of fat in the abdominal wall and any laxity or hernia of the abdominal wall is repaired at the same time - see Fig.2

In the **extended abdominoplasty** surplus skin and fat of the loins and back are also removed so that the scar extends around the flanks onto the lower back - see Fig.3.

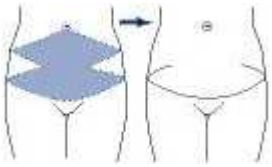

**Fig 3.***Extended abdominoplasty the scar extends around the flanks onto the lower back.*

The **endoscopic abdominoplasty** is used to tighten the muscles of the abdominal wall to give a better contour and is carried out through a short transverse incision above the pubic hair. Skin is not removed but liposuction can be carried out at the same time.

The **apronectomy** is a modification of the mini-abdominoplasty for patients who have a large excess of skin and fat hanging down over the pubic area. In this procedure only the surplus skin and fat is removed. The scar is long and transverse extending from one side of the apron to the other.

Modifications to the abdominoplasty skin excision are made when the patient has particular problems associated with scars from previous operations.

An alternative procedure which should always be considered instead of many of the above is liposuction on its own. This reduces fat and causes just a little retraction of the skin.

## Who is a candidate?

Anyone who has abdominal skin and fat may be a candidate. With women the problem is usually caused by pregnancy, but is greatly aggravated by weight loss. The muscles of the abdominal wall may be weakened by pregnancy and actually pulled apart in the middle (divarification of recti). Men are similarly affected by weight loss. Stretch marks (striae) are simply the scars which are left after extreme stretching of the skin. They are usually most apparent on the lower part of the abdominal wall. There is no specific treatment for these stretch marks, but many of them are excised in an abdominal reduction and those that are left are tightened making them look less obvious.

Patients that are unable to tighten the abdominal wall skin with exercise or wish to achieve a smoother flatter abdomen will also benefit.

## What are the consequences?

The patient is left with noticeable scars. The main scar runs transversely across the lower part of the abdomen (see illustrations) and in a standard abdominal reduction there will be a scar around the umbilicus. Other or different scars may be left where the patient has particular individual problems. Some patients make better scars than others and in any case all scars are red initially. It is essential that the patient understands where these scars will be and should discuss them with the surgeon. Although we try and hide them beneath underwear and swim wear fashions can change making previously covered scars visible.

There is numbness in the lower part of the abdominal wall after surgery this is usually temporary but could be permanent. Swelling above the scar is usually present due to a collection of tissue fluid which normally drains to the groin. This swelling or oedema settles within a few months.

## What are the limitations?

The skin is usually tightened downwards and this does not tighten the waist. If this is desired then one can consider removing skin vertically, but one should bear in mind that vertical scars of the abdomen are less good. The tissue of the abdominal wall is generally fatter than the groin and if liposuction is not carried out a fatty bulge may remain above the scar.

The beneficial effects of the operation will last well, however, the effects will be maintained better if the patient keeps exercising the muscles and the weight steady. A further pregnancy will of course stretch the skin again, although probably not to the same degree.

## What are the risks?

The standard abdominoplasty is a large procedure requiring two to four days hospitalisation. Drains are removed when they stop draining blood and serum a few days after the procedure. This fluid can reaccumulate after the drains are removed requiring drainage or aspiration.

Healing can be slow particularly in the tighter central part of the wound and sometimes dressings are needed for a few weeks. This is more common in patients who are overweight and who smoke. This tends to leave more obvious scars which are tethered - these can be revised.

Secondary procedures are sometimes carried out to tidy up the results and will involve scar revision and limited liposuction. Displacement of the umbilicus to one side has been over publicised and is rare. Deep vein thrombosis and pulmonary embolus are rare complications of any operation including this one.

## What would you need to do before the operation?

If you are overweight you would be well advised to diet as best results are obtained in people who are the correct weight for their height. If you are taking the contraceptive pill you should stop doing so for six weeks before surgery and use an alternative method in order to reduce the risk of thrombosis. If you smoke there is a greater risk of chest infection and in particular healing of the abdominal wound is less good.

## What you should expect at the time of the operation?

You will need to be in hospital for one to three days. When you wake up for your operation it is likely that you will be having a transfusion of salt solution. This is quite normal and is to provide you with fluid you need whilst you are not drinking. You are likely to have drainage tubes coming out of each side of the lower abdomen which are there to drain any collection of blood or serum. You can expect some moderately severe pain for which you will be given pain killing tablets or injections. You will be asked to keep your knees and hips bent to take the strain off your stitches.

## Recuperation

Over activity in the early days reduces healing and increases fluid accumulation. Light activities are comfortable in 10 to 20 days. Sports will not be possible for about 6 weeks particularly when the muscles have been strengthened with sutures. A corset is usually helpful to reduce the swelling and improve comfort in the first month.