

NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Interventional procedures consultation document

Liposuction for chronic lymphoedema

Chronic lymphoedema is the swelling and build-up of body fluid and fat because of problems with the lymphatic system. It most commonly affects the arms and legs. Liposuction is usually used for those people for whom other conservative measures have not improved symptoms. This procedure is typically done under general anaesthesia but can be done under local anaesthesia. This procedure uses suction to remove fluid and fat tissue through punctures in the skin. Afterwards, a compression garment must be worn for life and only removed for short periods. The aim of the procedure is to reduce swelling and improve function.

NICE is looking at liposuction for chronic lymphoedema. This is a review of NICE's interventional procedures guidance on liposuction for chronic lymphoedema.

NICE's interventional procedures advisory committee met to consider the evidence and the opinions of professional experts, who are consultants with knowledge of the procedure.

This document contains the [draft guidance for consultation](#). Your views are welcome, particularly:

- comments on the draft recommendations
- information about factual inaccuracies
- additional relevant evidence, with references if possible.

NICE is committed to promoting equality of opportunity, eliminating unlawful discrimination and fostering good relations between people with particular protected characteristics and others.

This is not NICE's final guidance on this procedure. The draft guidance may change after this consultation.

After consultation ends, the committee will:

- meet again to consider the consultation comments, review the evidence and make appropriate changes to the draft guidance
- prepare a second draft, which will go through a [resolution process](#) before the final guidance is agreed.

Please note that we reserve the right to summarise and edit comments received during consultation or not to publish them at all if, in the reasonable opinion of NICE, there are a lot of comments or if publishing the comments would be unlawful or otherwise inappropriate.

Closing date for comments: 16th December 2021

Target date for publication of guidance: April 2022

1 Draft recommendations

- 1.1 Evidence on the efficacy and safety of liposuction for chronic lymphoedema is adequate. The evidence on safety shows that the potential risks include venous thromboembolism, fat embolism, and fluid overload. This procedure can be used provided that standard arrangements are in place for clinical governance, consent and audit. Find out [what standard arrangements mean on the NICE interventional procedures guidance page](#).
- 1.2 For auditing the outcomes of this procedure, the main efficacy and safety outcomes identified in this guidance can be entered into [NICE's interventional procedure outcomes audit tool](#) (for use at local discretion).
- 1.3 Patient selection must be done by a multidisciplinary team with expertise in managing lymphoedema.
- 1.4 The procedure should only be done in specialist centres by clinicians with training and expertise in liposuction for lymphoedema following agreed perioperative protocols.

2 The condition, current treatments and procedure

The condition

- 2.1 Lymphoedema is the abnormal accumulation of subcutaneous fluid and fat in body tissues. It leads to chronic swelling that can cause disability, pain, and cosmetic issues. Any part of the body can be affected, but the condition is most common in the arms and legs. Lymphoedema can be complicated by recurrent infection (cellulitis), which further damages the lymphatic vessels and aggravates the condition. Primary lymphoedema results from a congenital inadequacy and gradual occlusion of lymphatics. Secondary

lymphoedema results from damage to the lymphatic system or removal of lymph nodes by surgery, radiation, infection, or injury. In the UK, one of the most common types of chronic lymphoedema is secondary lymphoedema of the arm after breast cancer or its treatment.

Current treatments

- 2.2 Current conservative treatments for lymphoedema include manual lymphatic drainage, which stimulates the movement of lymph away from the affected limb, and decongestive lymphatic therapy. Decongestive lymphatic therapy combines manual lymphatic drainage massage techniques with compressive bandaging, skin care and decongestive exercises. Once decongestive lymphatic therapy sessions are stopped, the person is fitted with a custom-made compression garment, which is worn every day for life. These techniques aim to reduce the pain and discomfort associated with lymphoedema. In severe cases, in people with lymphoedema that does not respond to conservative treatment, surgery can be used. Surgery includes liposuction to reduce the size of the limb, and procedures to restore lymphatic flow from the limb. These procedures include constructing an alternative lymph drainage pathway via lymphovenous anastomosis, or through lymph node transfer from a donor site.

The procedure

- 2.3 Liposuction for chronic lymphoedema is usually done under general anaesthesia, but regional nerve blockade is also possible. A tourniquet is applied to the proximal limb. A few small incisions are made in the limb. Cannulas, connected to a vacuum pump, are inserted into the incisions and oedematous adipose tissue is removed by vacuum aspiration. Liposuction is done around and all the way along the limb up to the distal border of the tourniquet. The tourniquet is then removed, the proximal limb, unable to be

controlled by tourniquet, is infused with tumescent solution, and the fat and fluid from this area are aspirated. Immediately after liposuction, a compression bandage is applied to the limb to control any bleeding and to prevent post-surgical oedema. Antibiotics and prophylaxis against venous thromboembolism are typically prescribed before and after the operation. After the procedure, a custom-made compression garment must be worn for life to maintain the volume reduction. This garment needs to be revised multiple times until the oedema volume has been reduced as much as possible and a steady state has been reached, but must still be worn for life.

3 Committee considerations

The evidence

- 3.1 NICE did a rapid review of the published literature on the efficacy and safety of this procedure. This comprised a comprehensive literature search and detailed review of the evidence from 7 sources, which was discussed by the committee. The evidence included 1 systematic review and meta-analysis, 1 systematic review, and 5 before-and-after studies. It is presented in [the summary of key evidence section in the interventional procedures overview](#). Other relevant literature is in the appendix of the overview.
- 3.2 The professional experts and the committee considered the key efficacy outcomes to be: sustained reduction in limb volume, improvement in quality of life including discomfort, limb symmetry and mobility.
- 3.3 The professional experts and the committee considered the key safety outcomes to be: pain, infection (including cellulitis), bleeding, venous thromboembolism and fat embolism and fluid overload.

- 3.4 Ten commentaries from patients who have had this procedure were discussed by the committee.

Committee comments

- 3.5 The committee was informed that there are a variety of techniques used for this procedure and they are not the same as the techniques used for cosmetic liposuction.
- 3.6 The committee noted that this is not a curative procedure, and that its effectiveness is dependent on the person wearing compression garments for life.
- 3.7 The committee was informed that liposuction for lymphoedema is typically only done once on a limb.
- 3.8 The committee was informed that this procedure should only be used when lymphoedema persists despite conventional conservative treatments.

Tom Clutton-Brock

Chair, interventional procedures advisory committee

November, 2021

ISBN: