

Standards for Liposuction Services

Version 1

Issue date: 04/07/2019

Effective date: 04/07/2019

Health Policies and Standards Department
Health Regulation Sector (2019)

INTRODUCTION

Health Regulation Sector (HRS) forms an integral part of Dubai Health Authority (DHA) and is mandated by DHA Law No. (6) of 2018, to undertake several functions including, but not limited to:

- Developing regulation, policy, standards, guidelines to improve quality and patient safety and promote the growth and development of the health sector
- Licensure and inspection of health facilities as well as healthcare professionals and ensuring compliance to best practice
- Managing patient complaints and assuring patient and physician rights are upheld
- Managing health advertisement and marketing of healthcare products
- Governing the use of narcotics, controlled and semi-controlled medications
- Strengthening health tourism and assuring ongoing growth
- Assuring management of health informatics, e-health and promoting innovation

The Standards for Liposuction aims to fulfil the following overarching DHA Strategic Objectives and Program within the Dubai Health Strategy (2016–2021):

- Objective 1: Position Dubai as a global medical destination by introducing a value-based, comprehensive, integrated and high-quality service delivery system
- Objective 2: Direct resources to ensure happy, healthy and safe environment for Dubai population
- Strategic Program 10: Excellence & Quality, which promotes excellence in healthcare service delivery in Dubai while enhancing patient happiness, experience, satisfaction and trust

ACKNOWLEDGMENT

The Health Policy and Standards Department (HPSD) developed this Standard in collaboration with Subject Matter Experts. HRS would like to acknowledge and thank these professionals for their dedication toward improving quality and safety of healthcare services.

Health Regulation Sector

Dubai Health Authority

TABLE OF CONTENTS

INTRODUCTION	2
ACKNOWLEDGMENT	3
EXECUTIVE SUMMARY	5
DEFINITIONS	6
ABBREVIATIONS	7
1. BACKGROUND	8
2. PURPOSE	8
3. SCOPE.....	9
4. APPLICABILITY	9
5. STANDARD ONE: REGISTRATION AND LICENSURE PROCEDURES	9
6. STANDARD TWO: HEALTH FACILITY REQUIREMENTS	11
7. STANDARD THREE: HEALTHCARE PROFESSIONALS REQUIREMENTS	12
8. STANDARD FOUR: PRE-OPERATIVE EVALUATION AND INFORMED CONSENT	13
9. STANDARD FIVE: INTRA OPERATIVE MANAGEMENT	15
10. STANDARD SIX: POST-OPERATIVE CARE	16
11. STANDARD SEVEN: DISCHARGE AND OUTPATIENT FOLLOW UP	17
12. STANDARD EIGHT: KEY PERFORMANCE INDICATORS (KPIs).....	17
REFERENCES	19
APPENDIX.....	21
APPENDIX 1: MINIMUM REQUIREMENTS FOR INFORMED CONSENT FORM.....	21

EXECUTIVE SUMMARY

Liposuction, also known as lipoplasty or body contouring, is a form of cosmetic surgery used to remove fatty deposits from the body. Contrary to popular perception, it is not a procedure designed for patients to lose weight, but rather it is for those who are near to their ideal weight and want to remove pockets of stubborn fat accumulation that diet and exercise cannot remove. Liposuction has been a part of the cosmetic surgery since the late 1970s. Initially, the treatment initially involved inserting a metal tube into the fatty tissue and using it to break up and absorb fat cells. In 1985, a more effective and less risky technique called tumescent liposuction was introduced. Since then other forms of liposuction procedures have been introduced like Wetting solution techniques, standard liposuction or suction-assisted lipoplasty, internal ultrasound-assisted liposuction, vaser-assisted liposuction, external ultrasound-assisted liposuction, laser-assisted liposuction, power-assisted liposuction, vibro liposuction (lipomatic), waterjet assisted and J-plasma liposuction.

This standard sets out the requirements for the provision of Liposuction service. Liposuction services shall only be performed in a General Hospital, Specialty Hospital or a Day Surgical Center (DSC) by a DHA licensed Specialist or Consultant Plastic Surgeon. The liposuction procedures must be a Consultant led service. Physicians must be supported by a minimum of two (2) perioperative Registered Nurses (RNs) for each liposuction procedure. Liposuction should be limited to 5,000 ml of total aspirate to include supernatant fat and fluid per procedure. A foley catheter should be inserted if more than 3,000 ml of liposuction is required.

DEFINITIONS

Consultant led service is a service where a consultant retains overall clinical responsibility for the service, care professional team or treatment. The consultant will not necessarily be physically present for each consultant led activity but the consultant takes clinical responsibility for each patient's care.

Liposuction is the surgical removal of subcutaneous fat by means of aspiration cannulas, introduced through small skin incisions, assisted by suction. Synonyms include liposuction surgery, suction- assisted lipectomy, suction lipoplasty, fat suction, blunt suction lipectomy, and liposculpture. Interventions may be performed using various surgical techniques: Wetting solution techniques, standard liposuction or suction-assisted lipoplasty, internal ultrasound-assisted liposuction, vaser-assisted liposuction, external ultrasound-assisted liposuction, laser-assisted liposuction, power-assisted liposuction, vibro liposuction (lipomatic), waterjet assisted and J-plasma liposuction.

Tumescent liposuction is a technique for the removal of subcutaneous fat under a special form of local anaesthesia called tumescent anaesthesia.

ABBREVIATIONS

ACLS	:	Advanced Cardiac Life Support
BMI	:	Body Mass Index
CME	:	Continuous Medical Education
DHA	:	Dubai Health Authority
DM	:	Dubai Municipality
DVT	:	Deep Vein Thrombosis
ECG	:	Electrocardiogram
FES	:	Fat Embolism Syndrome
HFG	:	Health Facility Guidelines
HRS	:	Health Regulation Sector
ICU	:	Intensive Care Unit
RN	:	Registered Nurse
UAE	:	United Arab Emirates

1. BACKGROUND

Liposuction is one of the most common surgical interventions carried out by physicians internationally. Since the introduction of liposuction techniques in 1982, the management of adipose tissue for aesthetic and reconstructive purposes had undergone a significant change. Liposuction was traditionally performed in the subcutaneous layer only. However, due to the advancement in medical technology and innovation, there are many forms of liposuction available in the 21st century. This does not mean that certain procedures are exempt from safety and quality precautions for surgery.

Liposuction is not a substitute for weight loss, but is a surgical intervention designed to treat superficial and deep deposits of subcutaneous fat distributed in aesthetically unpleasing proportions. Patients opting for liposuction should essentially have made a concentrated effort to address the problem area(s) through a well-balanced diet and regular exercise. It has been proven to be a successful method of improving body contour. Liposuction is more often a standalone procedure, but it may also be used in conjunction with other plastic surgery procedures for the purposes of fat transfer to correct deformities or for body sculpting.

These standards have been developed to ensure that appropriately qualified and experienced physicians carry out liposuction procedures safely and effectively.

2. PURPOSE

- 2.1. To assure provision of the highest levels of safety and quality of Liposuction services in Dubai Health Authority (DHA) licensed health facilities.

3. SCOPE

3.1. Liposuction services in DHA licensed health facilities.

4. APPLICABILITY

4.1. DHA licensed healthcare professionals and health facilities providing liposuction services.

5. STANDARD ONE: REGISTRATION AND LICENSURE PROCEDURES

5.1. All health facilities providing liposuction services shall adhere to the United Arab Emirates (UAE) Laws and Dubai regulations.

5.2. Health facilities aiming to provide Liposuction services shall comply with the DHA licensure and administrative procedures available on the DHA, Health Regulation Sector (HRS) Website, [Health Regulation Sector](#).

5.3. Licensed health facilities opting to add Liposuction services shall inform Health Regulation Sector (HRS) and submit an application to HRS to obtain permission to provide the required service.

5.4. The health facility should develop the following policies and procedure; but not limited to:

- 5.4.1. Patient acceptance criteria
- 5.4.2. Patient assessment and admission
- 5.4.3. Patient education and Informed consent
- 5.4.4. Patient health record

- 5.4.5. Infection control measures and hazardous waste management
 - 5.4.6. Incident reporting
 - 5.4.7. Patient privacy
 - 5.4.8. Medication management
 - 5.4.9. Emergency action plan
 - 5.4.10. Patient discharge/transfer.
- 5.5. The health facility shall provide documented evidence of the following, but not limited to the following:
- 5.5.1. Transfer of critical/complicated cases when required
 - 5.5.2. Patient discharge
 - 5.5.3. Clinical laboratory services
 - 5.5.4. Equipment maintenance services
 - 5.5.5. Laundry services
 - 5.5.6. Medical waste management as per Dubai Municipality (DM) requirements
 - 5.5.7. Housekeeping services.
- 5.6. The health facility shall maintain charter of patients' rights and responsibilities posted at the entrance of the premise in two languages (Arabic and English).
- 5.7. The health facility shall have in place a written plan for monitoring equipment for electrical and mechanical safety, with monthly visual inspections for apparent defects.

- 5.8. The health facility shall ensure it has in place adequate lighting and utilities, including temperature controls, water taps, medical gases, sinks and drains, lighting, electrical outlets and communications.

6. STANDARD TWO: HEALTH FACILITY REQUIREMENTS

- 6.1. Liposuction shall only be performed in a General Hospital, Specialty Hospital or a Day Surgical Center.
- 6.2. The health facility should meet the health facility requirement as per the DHA Health Facility Guidelines (HFG).
- 6.3. The health facility should install and operate equipment required for provision of the proposed services in accordance to the manufacturer's specifications.
- 6.4. The health facility shall ensure easy access to the health facility and treatment areas for all patient groups.
- 6.5. The health facility design shall provide assurance of patients and staff safety.
- 6.6. The health facility shall have appropriate equipment and trained healthcare professionals to manage critical and emergency cases.
- 6.7. Day Surgical Centers opting to perform liposuction services that do not have fully equipped Intensive Care Unit (ICU) capabilities shall have ventilators and hemodynamic monitoring equipment on-site to perform necessary patient resuscitation.

7. STANDARD THREE: HEALTHCARE PROFESSIONALS REQUIREMENTS

- 7.1. Only a DHA licensed Specialist or Consultant Plastic Surgeon shall be permitted to perform liposuction. Liposuction procedures should be a consultant led service at all times.
- 7.2. The Privileging Committee and/or Medical Director of the health facility shall privilege the physician aligned with his/her education, training, experience and competencies. The privilege shall be reviewed and revised on regular intervals. The privileged Plastic Surgeon shall comply with the following:
 - 7.2.1. Maintain documented evidence of training in liposuction and cutaneous surgery from a recognized institute under the supervision of appropriately trained and experienced liposuction surgeon(s). In addition to the surgical technique, the physician shall be trained on fluid and electrolyte balance, potential complications of liposuction, tumescent and other forms of anaesthesia as well as emergency resuscitation and care.
 - 7.2.2. Maintain documented evidence of experience with satisfactory performance of liposuction procedures.
 - 7.2.3. Maintain competency with subject related Continuous Medical Education of 50 (CME) credits per year and periodic practice review.
 - 7.2.4. Hold an active Advanced Cardiac Life Support (ACLS) certification.
- 7.3. A physician shall be supported by a minimum of two (2) perioperative Registered Nurses (RNs) for each liposuction procedure.

7.4. RNs assisting in liposuction shall be knowledgeable and trained in the different aspects of the liposuction procedure like maintaining aseptic fields and instruments, proper use of equipment, appropriate patient monitoring, assisting in emergency procedures and cardiopulmonary resuscitation if required.

7.5. There must be a dedicated RN in the recovery area to monitor the patient until discharge.

8. STANDARD FOUR: PRE-OPERATIVE EVALUATION AND INFORMED CONSENT

8.1. A detailed medical history with respect to any previous disease, drug intake and prior surgical procedures shall be taken of any patient indicated for liposuction.

8.2. Known contraindication shall be considered (and their absence) noted in the health records which may include the following:

8.2.1. Significant medical conditions that may be aggravated by surgery or anaesthesia.

8.2.2. Coagulopathies.

8.2.3. Medications that impair haemostasis or that interact adversely with epinephrine.

8.2.4. Local conditions of skin or subcutaneous tissue that make liposuction hazardous (e.g. certain scars, hernias and injuries).

8.2.5. Significant skin laxity.

- 8.2.6. Morbid obesity (patients having a Body Mass Index (BMI) of 40 or more for Caucasians and 37.5 for Asians).
- 8.2.7. Psychological contraindications such as mood disorders, thought disorders, severe anxiety, or unrealistic expectations.
- 8.3. Physical evaluation of the patient should be detailed and should include assessment of general physical health to determine the fitness of the patient for surgery, as well as the examination of specific sites that need liposuction to check for potential problems.
- 8.4. Pre-operative laboratory testing should be performed to include haemoglobin level, blood counts including platelet counts, bleeding and clotting time (or prothrombin and activated partial thromboplastin time) blood chemistry profile including liver function tests, pregnancy test for women of childbearing age and electrocardiogram (ECG) and chest X-Ray for patients aged 50 years or more.
- 8.5. Ultrasound examination and hormonal tests should be conducted in cases of gynecomastia.
- 8.6. The patient shall sign a detailed consent form listing details about the procedure and possible complications aligned with the DHA Guidelines for Patient Consent and specific other details as mentioned in **Appendix 1**.
- 8.7. Informed consent shall include verbal consultation and explanation and the provision of written educational material and discussion with patient including but not limited to:
- 8.7.1. Alternatives to liposuction.

- 8.7.2. All usual and occasional side effects and complications e.g. swelling, pain seroma, haematoma, hyperpigmentation.
- 8.7.3. All potentially, life-threatening complications e.g. fat embolism syndrome (FES), pulmonary oedema and necrotizing fasciitis sepsis, perforation of abdominal or thoracic viscera, cardiac arrest, hypotension and haemorrhage.
- 8.7.4. The possibility of a poor cosmetic and surgical outcome.
- 8.7.5. The training and experience of the physician and supportive surgical team.
- 8.7.6. Limitations of the procedure and if more procedures are needed for proper results.

9. STANDARD FIVE: INTRA OPERATIVE MANAGEMENT

- 9.1. Liposuction should be limited to 5,000 ml of total aspirant to include supernatant fat and fluid per procedure. A foley catheter should be inserted if more than 3,000 ml of liposuction is needed.
- 9.2. For liposuction as an adjunct to other procedures, there should be a maximum of 2,000 ml total aspirate volume per procedure.
- 9.3. Each liposuction procedure must be conducted by a Plastic Surgeon who is supported by minimum of two (2) perioperative nurses who are trained and knowledgeable in the liposuction procedure, safe tumescent drug concentrations, fluid management and appropriate patient monitoring.

- 9.4. All solutions shall be prepared, labelled and signed by a qualified RN, physician or pharmacist, using aseptic techniques and as per written protocols.
- 9.5. Intravenous access shall be initiated prior to the procedure and maintained throughout.
- 9.6. The physician shall perform infiltration and aspiration.
- 9.7. Patients undergoing liposuction shall be continuously evaluated with a pulse oximeter with audible signal recognition and an apparatus to measure blood pressure.
- 9.8. In addition to the above, devices or drugs material must be made immediately available and include a stethoscope, source of oxygen, self-inflating bag-valve-mask device and emergency crash cart.
- 9.9. The Day Surgical Center shall have a policy in place for management and transfer of patients in case of emergencies.
- 9.10. Day Surgical Centers providing liposuction service shall have a signed written transfer agreement with a nearby hospital to ensure timely transfer of complicated cases.

10. STANDARD SIX: POST-OPERATIVE CARE

- 10.1. There must be a dedicated RN in the recovery area who is appropriately trained, knowledgeable and skilled in monitoring vital signs, emergency procedures, fluid and electrolyte balance and awareness and management of potential complications of tumescent anaesthesia. The RN's sole responsibility must be to monitor the patient post-operatively until discharge.

11. STANDARD SEVEN: DISCHARGE AND OUTPATIENT FOLLOW UP

- 11.1. The health facility shall comply with the health facilities protocol for discharging patients and follow up after sedation/anaesthesia.
- 11.2. The health facility shall maintain written policies and procedures concerning the patient discharge, which reflect acceptable standards of practice and compliance with applicable regulations in the Emirate of Dubai.
- 11.3. Each patient discharge after a liposuction procedure shall receive a written discharge plan, in non-technical language, along with sufficient oral explanations to assist the patient and their nominated carer in understanding the plan and availability of outpatient services capable of meeting the patient's discharge needs.

12. STANDARD EIGHT: KEY PERFORMANCE INDICATORS (KPIs)

- 12.1. Clinical Quality- Rate of Unplanned readmissions within 28 days due to post-operative complications for e.g. Deep Vein Thrombosis (DVT), Cardiac Pulmonary Complication, persistent skin sensation change, irregular contour or symmetries, rippling or loose skin, worsening of cellulite.
- 12.2. Patient Happiness- Average waiting time for Elective Surgery
- 12.3. Patient Happiness- Recommendation to others
- 12.4. Patient Safety – Rate of 30 day mortality after surgery
- 12.5. Patient Safety – Rate of Medical Errors
- 12.6. Patient Safety – Rate of Medication Errors

12.7. Patient Safety – Rate of Surgical Site Infection (SSI)

12.8. Patient Safety – Reoperation within 30 days post-surgery

REFERENCES

1. Advisory Committee on Non-Hospital Surgical Facilities (2015). Tumescent Liposuction, Standards and Guidelines. College of Physicians and Surgeons of Alberta, V-5, 1-10. Available on :
http://cpsa.ca/wp-content/uploads/2015/03/Tumescent_Liposuction_Standards.pdf
(accessed 24/02/19).
2. Agullo F, Palladino H, Sozer S (2011). Complications of Liposuction, Advanced Techniques in Liposuction and Fat Transfer, 221-230. Available on :
<https://www.intechopen.com/books/advanced-techniques-in-liposuction-and-fat-transfer/complications-of-liposuction/> (accessed 04/05/19).
3. Hwan K (2011). Analysis of Postoperative Complications for Superficial Liposuction: A Review of 2398 Cases. Plastic and Reconstructive Surgery, Volume 127 - Issue 2, 863-871. Available on :
http://journals.lww.com/plasreconsurg/Abstract/2011/02000/Analysis_of_Postoperative_Complications_for.45.aspx (accessed 18/03/19).
4. Lehnhardt M (2008). Major and Lethal Complications of Liposuction: A Review of 72 Cases in Germany between 1998 and 2002. Plastic and Reconstructive Surgery, Volume 121 - Issue 6, 396-403. Available on :
http://journals.lww.com/plasreconsurg/Abstract/2008/06000/Major_and_Lethal_Complications_of_Liposuction_A.35.aspx (accessed 27/03/19).
5. Liposuction, Lipoplasty (2017). American Society of Plastic Surgeons. Available on :

<https://www.plasticsurgery.org/cosmetic-procedures/liposuction> (accessed 18/03/19).

6. Mysore V, Tumescent liposuction: Standard guidelines of care (2008). Indian Journal of Dermatology, Venereology and Leprology, 74, 54-60. Available on :

<http://www.ijdvl.com/article.asp?issn=03786323;year=2008;volume=74;issue=7;spage=54;epage=60;aualast=Mysore> (accessed 04/05/19).

7. Quality and Patient Safety Indicators (2017). Agency for healthcare research and Quality.

Available on :

https://www.qualityindicators.ahrq.gov/Modules/PSI_TechSpec.aspx (accessed 18/03/19).

8. Tsai R Y (2018). Experience of Tumescent Liposuction in the Treatment of Osmidrosis.

Dermatologic Surgery, Volume 27, Issue 5, 446–448. Available on :

<http://onlinelibrary.wiley.com/doi/10.1046/j.1524-4725.2001.00318.x/full> (accessed

04/05/19).

APPENDIX

APPENDIX 1: MINIMUM REQUIREMENTS FOR INFORMED CONSENT FORM

Informed Consent Form For Patients
<p>Name of Healthcare Professional: _____</p>
<p>Name of Health Facility: _____</p>
<p>Name of Patient: _____ File No: _____</p>
<p>This Informed Consent Form has two parts:</p> <ul style="list-style-type: none">• Information Sheet (to share information about the treatment with you)• Certificate of Consent (for signatures if you agree to go ahead with the treatment)
<p><i>You will be given a copy of the full Informed Consent Form</i></p>
<p>PART I: Information Sheet</p>
<p>Introduction:</p> <p>I, Dr. _____ with license No: _____ should be performing the _____ treatment/ procedure on Miss/Mrs./Mr. _____ aged _____ years, on date _____.</p>
<p><u>Description of the Procedure and Process</u></p> <p>Describe to the patient or customer, the procedure and what will happen on a step-by-step basis. The patient should be informed that procedure is newly introduced and the amount of supporting research and study available.</p>
<p>Side Effects</p> <p>Potential patients should be told if there are any known or anticipated side effects and what will happen in the event of a side effect or an unexpected event.</p>

Risks

Explain and describe any possible or anticipated risks. Describe the level of care that will be available in the event that harm does occur, who will provide it, and who will pay for it.

Complications

Inform and explain any possible complications that could be caused as a result of the treatment.

Discomforts

Explain and describe the type and source of any anticipated discomforts that are in addition to the side effects and risks discussed above.

Benefits

Mention only those activities that will be actual benefits of the treatment.

Confidentiality

Explain how the clinical team will maintain the confidentiality of data, especially with respect to the information about the patient including photography and videography.

Right to Refuse treatment/procedure

This is a reconfirmation that the patient has the right to refuse the treatment.

Alternatives to clinical procedure or treatment

It is important to explain and describe the established standard treatment or procedure for the patient's condition.

Financial Implications

All procedures/treatments provided that are not covered by insurance or which may require the patient's full payment or co-payment.

PART II: Certificate of Consent

This section can be written in the first person. It should include a few brief statements about the treatment and be followed by a statement similar to the one in bold below. The healthcare professional performing the treatment and the person going over the informed consent should sign the consent.

Example:

Patient Consent statement

I have read the foregoing information, or it has been read to me. I have had the opportunity to ask questions about it and any questions that I have asked have been answered to my satisfaction. I consent voluntarily to undergo tis treatment and understand that I have the right to withdraw from the procedure or treatment at any time without in any way affecting my medical care.

Name of Patient: _____

Signature of Patient: _____ Date: _____

Witness statement

I have accurately read or witnessed the accurate reading of the consent form to the potential patient, and the individual has had the opportunity to ask questions. I confirm that the individual has given consent freely.

Name of witness: _____

Signature of witness: _____ Date: _____

Healthcare Professional Declaration:

I have adequately explained to the patient about the procedure along with risks, adverse effects and the standard alternatives that are available for the procedure. I have permitted time and opportunity for the patient to ask questions and all questions have been answered to my knowledge

Name of healthcare professional: _____

Signature of healthcare professional : _____ Date: _____