



THUASNE

**Lymphedema
Treatment**
Information
and solutions



Dear readers,

The purpose of this leaflet is to provide you with information about lymphedemas. You will find in it a description of the lymphatic system, lymphedema symptoms and treatments, but also advice to help you take care of your lymphedema and solutions offered by Thuasne to accompany you.

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USEFUL THINGS
TO KNOW



STANDARD
DEVICE



MADE-TO-MEASURE
PATIENT DEVICE



CIRCULAR
KNIT



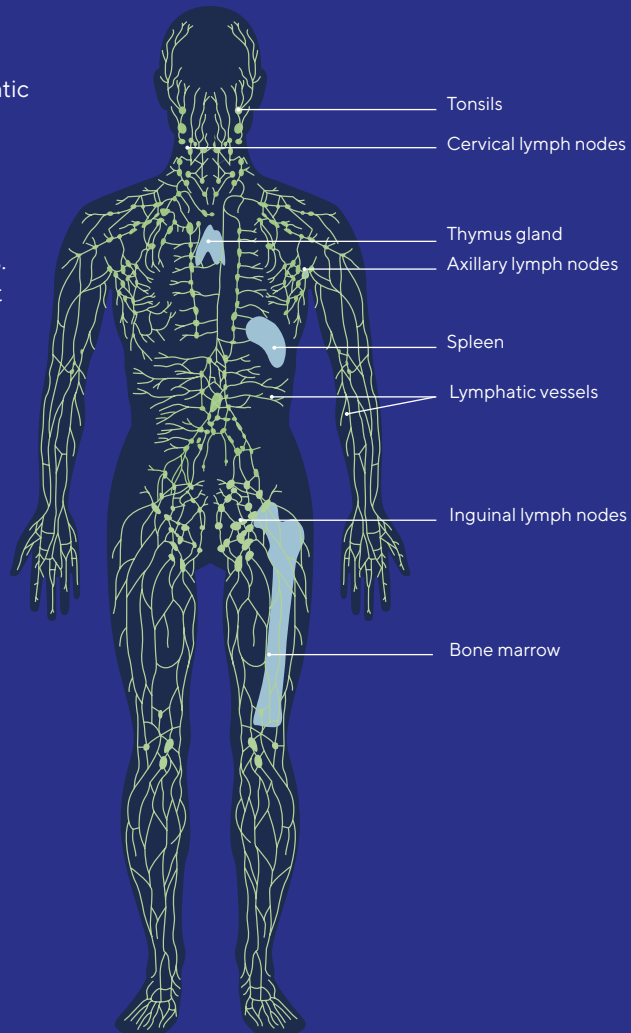
FLAT
KNIT



What is the lymphatic system?

The lymphatic system is made up of a series of canals called lymphatic vessels, lymph nodes and some organs.

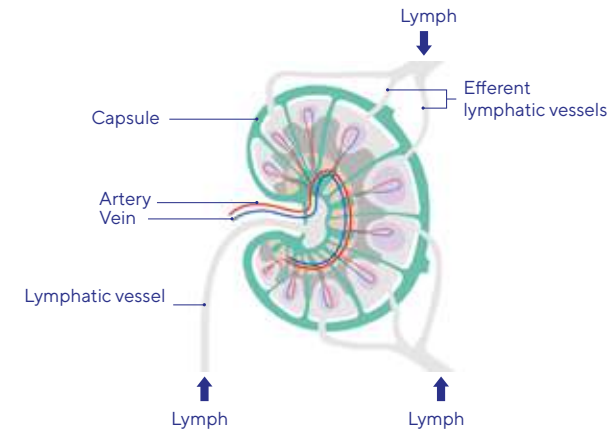
It helps to protect the body against diseases and infections. It is the most important part of the immune system.⁽¹⁾



THE LYMPH NODES ⁽¹⁾

This large network, present throughout the body (except the brain, muscles, cartilage and bone marrow), is made up of lymph nodes: small bean-shaped organs grouped together.

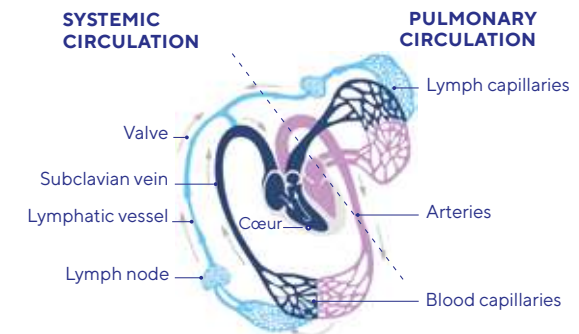
Thousands of lymph nodes are distributed throughout the body. They are most often found along veins and arteries.



THE LYMPHATIC CIRCULATION ⁽²⁾

The lymphatic vessels, which branch out throughout the body, carry a fluid containing white corpuscle (or lymphocytes) called the lymph.

Lymph is filtered through the lymph nodes and several organs such as the spleen, tonsils, bone marrow and thymus gland to remove bacteria, viruses and other foreign substances.



(1) <https://www.e-cancer.fr/Dictionnaire/G/ganglion-lymphatique> - December 2019
(2) <https://www.e-cancer.fr/Dictionnaire/L/lymphe> - December 2019

What is a lymphedema?

Lymphedema definition

Lymphedema is a chronic disease caused by a malfunction of the lymphatic system due to a malformation (primary lymphedema) or to a damage (secondary lymphedema)⁽¹⁾.

It results in a blockage or a slowing down of the circulation of the lymph between the cells and tissues of the body. Lymph accumulated in the subcutaneous tissues causes swelling of one or multiple body parts (usually upper, lower limb or genital area), that generates discomfort, heaviness and loss of mobility⁽²⁾.

Lymphedema can develop in different ways. For some people, it may be temporary and decrease slightly, for others it may persist and become resistant⁽¹⁾.



(1) HAS - La compression médicale dans le traitement du Lymphoedème - 2010
(2) <https://www.e-cancer.fr/Patients-et-proches/Les-cancers/Cancer-du-sein/Lymphoedeme> - Lymphoedème - Mars 2020

What is a lymphedema?

Lymphedema origin

Primary lymphedema⁽¹⁾

Primary lymphedema is related to a malformation of all or part of the lymphatic system.

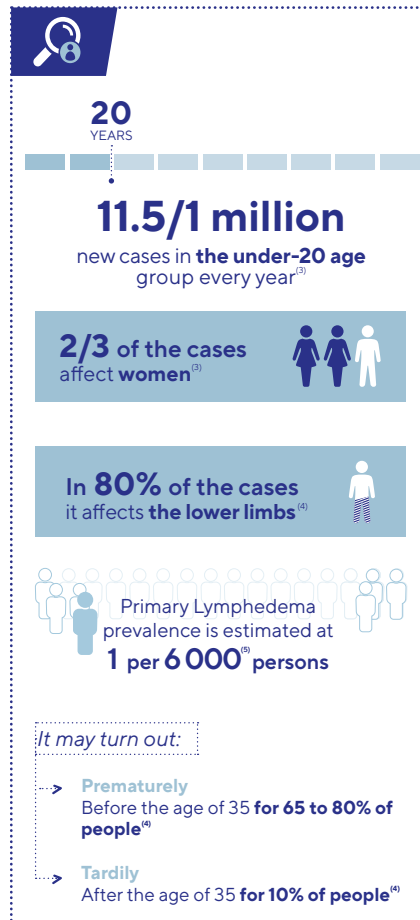
In more than 95% of cases, primary lymphedema affects a person without any family member being affected.

Depending on the age, primary lymphedema is divided into 3 groups:

- **Congenital lymphedema:** Edema appears at birth. They represent 10 to 25%⁽²⁾ of primary lymphedema cases.
- **Mild lymphedema:** It appears before the age of 35, often at puberty, and represents 65 to 80%⁽²⁾ of primary lymphedema cases. There are also familial forms such as Meige disease.
- **Late Lymphedema:** Appears after the age of 35 and represents 10%⁽²⁾ of primary lymphedema cases.

Most often primary lymphedema affects the lower limbs (in 80% of cases), uni- or bilaterally, and more rarely an upper limb, or the face.⁽²⁾

Primary lymphedema often begins abruptly as a result of shock (physical or psychological), severe fatigue, infection, or pregnancy. It appears gradually and its increase in volume is difficult to predict.



Secondary lymphedema

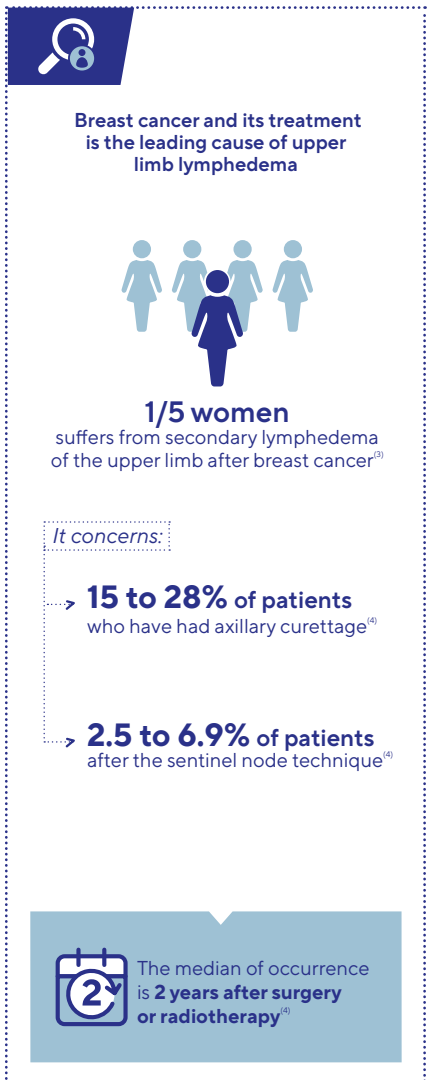
Secondary lymphedema is due to an alteration of the lymphatic system.

It can occur as a result of surgery, an inflammation, obesity, a traumatism, treatment of a cancer, an accident or an infection.

Secondary lymphedema affects 10 to 50%⁽¹⁾ of patients (male or female) undergoing lymph node removal or radiation therapy. This risk may double after certain surgeries, chemotherapy or mastectomy. Some forms of cancer can also cause lymphedema.

Surgical removal of lymph nodes in the armpits may be part of the initial surgical treatment for breast cancer patients. If cancer cells have spread to the lymph nodes in the armpits, they are surgically removed.⁽²⁾

The risk of developing lymphedema is increased when surgery is combined with radiation therapy, when the patient is obese, or if many lymph nodes are removed.



(1) Lymphoedema Framework. Best Practice for the Management of Lymphoedema. International consensus. London : MEP Ltd, 2006
 (2) Le lymphoedème primaire - Novembre 2007 - Document réalisé avec la collaboration du Docteur Stéphane Vignes / Consultation du centre de référence des maladies vasculaires rares / Hôpital Cognacq-Jay, Paris.
 (3) Les lymphoedèmes du membre inférieur - Dr Marlène Coupé - Mars 2020 - Pages 22-23
 (4) Lymphoedème primaire - Orphanet - Mars 2020 - Page 2
 (5) Orphanet, webportal on rare diseases and orphan drugs, www.orpha.net : Primary lymphedema - November 2007 - Document prepared in collaboration with: Dr Stéphane Vignes / Consultation of the reference center for rare vascular diseases, Cognacq-Jay Hospital, Paris.

(1) S. Vignes, M. Arrault, M. Ebelin ; Effet délétère d'un acte chirurgical sur le volume d'un lymphoedème du membre supérieur après cancer du sein - Doi : JMV-09-2006-31-4-0398-0499-101019-200519764
 (2) Les lymphoedèmes des membres : diagnostic, exploration, complications - S. Vignes, M. Coupé, F. Beaulieu, L. Vaillant, pour le groupe « Recommandations » de la Société Française de Lymphologie - Journal des Maladies Vasculaires (2009) 34, 314-322
 (3) Lymphoedèmes secondaires du membre supérieur après cancer du sein - S. Alran, A. Arnaud, J.-C. Biffaud, J.-C. Ferrandez, P. Heudel - 13 March 2016
 (4) Prise en charge du lymphoedème secondaire du membre supérieur après un cancer du sein - March 2014

What is a **pelvic and genital lymphedema**?

Pelvic and genital lymphedema : definition and origin

Primary lymphedema⁽¹⁾

The primary pelvic and genital lymphedema is generally due to a congenital condition or a primary lymphatic abnormality.

Often, this lymphedema affects both lower limbs as well as the pubis and genitals.

Secondary lymphedema⁽¹⁾

The secondary pelvic and genital lymphedema is generally a result from various lesions of the lymphatic system (trauma, surgery, radiation therapy...).

This lymphedema can affect only one or both lower limbs (preferably the proximal part: thigh), as well as the pelvis and external genitals.

Today, there is a lack of solutions for the treatment of pelvic and genital lymphedema and a low proportion of patients treated (30% primary lymphedema / 30% secondary lymphedema).



10% of patients
treated for gynecological cancer
will develop a **symptomatic pelvic
or genital lymphedema**⁽²⁾

and **15% a NON-symptomatic
pelvic or genital lymphedema**⁽²⁾

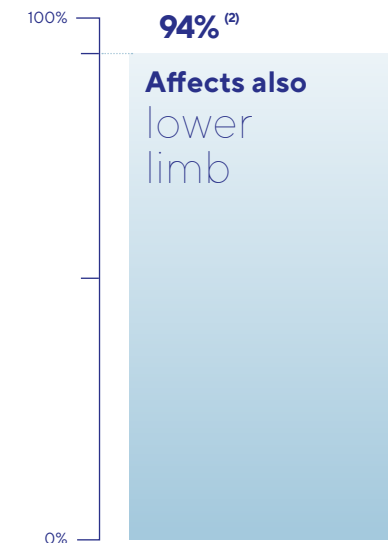
Pelvic and genital lymphedema : risk factors⁽¹⁾

Pelvic and genital lymphedema can occur as a result of surgery and traumatism, radiotherapy, a venereal disease or parasitic infections (involve the inguinal nodes).

More rarely, it can occur as a result of Crohn's disease, sarcoidosis, rosacea or granulomatous lymphadenitis.



Usually, pelvic and genital lymphedema is associated with lower limb lymphedema



(1) ILF - Best practice for the management of lymphedema - 2016

(2) Lymphoedema Framework. Best Practice for the Management of Lymphoedema. International consensus. London: MEP Ltd, 2006.

(1) Whitaker 2009, genital oedemamale Nestor torio-pradon 2015, Treatment of genital lymphedema: An integrated concept Shim et al 2019, Penile lymphoedema: approach to investigation and management

(2) OLYMPY study : Exploratory study to assess the clinical benefits of wearing the MOBIDERM Intimate Short in patients with pelvic and/or genital lymphedema. - 2021 - 32 patients - n° ID-RCB: 2020-A00247-32; primary objective: assessment of the effect of the MOBIDERM Intimate short, after 12 weeks, on an overall impression of change in their quality of life in relation to PL/GL

What are the diagnosis and symptoms?

There are **4 stages of lymphedema**⁽¹⁾.

Severe stage, also called elephantiasis

- Particularly large, swollen and deformed limb
- Permanent and irreversible edema
- Negative Pitting test
- Skin firm, hard, no longer reacts to touch, may become dark or have small growths, blisters and elephant skin appearance.
- Excess volume is more than 40%
- Significant loss of mobility

Moderate stage

- Larger and permanently extended edema
- Negative Pitting test
- Positive Stemmer-Kaposi's test in case of lower limb lymphedema if the foot is affected
- Folds, inflammations and changes in skin tissue (thickening) and subcutaneous tissue (hardening)
- Lymphedema is spontaneously irreversible: the volume of the affected limb diminishes when it is raised
- Excess volume is between 20 and 40% compared to the healthy limb
- Risk of infection is increased and favors a stage III

Mild stage

- Edema localized on one limb
- Positive Pitting test
- Skin and tissue are not permanently damaged
- Lymphedema is reversible: the volume of the affected limb decreases when it is lifted
- Edema is painless
- Excess volume is less than 20% compared to the healthy limb

Latency stage

- Little or no visible swelling
- Asymptomatic in the majority of cases
- Possible symptoms: heaviness of the affected limb and fatigue
- Duration: several months or years before the edema appears

Symptoms

It is important to diagnose lymphedema as early as possible in order to ensure proper management and treatment.

What are the symptoms⁽¹⁾



Symptoms may vary depending on the lymphedemas. Generally they are the following:

- Swelling
- Feeling of heaviness and discomfort
- Burning sensation
- Difficulty moving
- Hardening or thickening of the skin

Diagnosis

How is lymphedema diagnosed?

Generally, the diagnosis of lymphedema is based on the **patient's questioning and examination**, and on the evolution of lymphedema symptoms according to the 3 stages.



The doctor questions the patient and looks for a history of various pathologies (for example: cancer) to see if his/her lymphedema is related to them.⁽¹⁾



The doctor then refers the patient to a specialist. The vascular physician, as a specialist in blood and lymphatic vessels, will make a more precise diagnosis and confirm the presence of "real" lymphedema or the existence of edema of another origin (cardiac, renal, hepatic or venous).

There are several **complementary explorations**:

- The **Echodoppler**, performed to eliminate a venous pathology.⁽²⁾
- The **CT scan** is used to make an accurate evaluation of the lymph nodes and the analysis of the topography of an edema.⁽³⁾
- The **lymphoscintigraphy** may also be performed. It consists of injecting a radioactive product into the tissue under the skin in the feet.⁽³⁾

Several tests are carried out during the visit at the specialist:

- The **Pitting test**: The doctor applies pressure with his finger to the affected tissue or mucous membrane. The sign is positive if, when removing his finger, the doctor observes an imprint that remains for a few seconds before disappearing. A positive pitting sign characterizes a liquid consistency of the lymphedema.⁽³⁾
- The **Stemmer-Kaposi test** : It tests the possibility or impossibility of wrinkling the dorsal surface of the skin of the first phalanx of the second toe. This test is considered positive when this wrinkling cannot be achieved and negative when it is possible. A positive Stemmer-Kaposi sign characterizes a fibrous consistency of the lymphedema.⁽⁴⁾

(1) Société Canadienne du cancer - Le Lymphoedème - <https://www.cancer.ca/fr-ca/cancer-information/diagnosis-and-treatment/managing-side-effects/lymphedema/?region=on>

(2) Lymphedema: From diagnosis to treatment - Oğuz Kayiran et al. Turk J Surg. 2017; 33(2): 51-57.

(3) Les lymphoedèmes des membres : diagnostic, exploration, complications - S. Vignes, M. Coupé, F. Beaulieu, L. Vaillant, pour le groupe «Recommandations» de la Société Française de Lymphologie - Journal des Maladies Vasculaires (2009) 34, 314-322

(4) Lymphoedème primaire - Orphanet - March 2020 - <https://www.orphanet.net/data/patho/Pub/fr/LymphoedemePrimaire-FRfrPub11097.pdf>

Lipedema or lymphedema?

Lipedema is very often confused with primary lymphedema of the lower limbs.

Indeed, they have the same main symptom: a very important volume gain in the legs which start to swell⁽¹⁾.

However, there are specificities for each of these pathologies.

Lipedema is an accumulation of adipose tissue. It affects both legs, from the thighs to the ankles. It rarely spreads to the foot and often affects obese women⁽¹⁾.

Lymphedema, on the other hand, **is generated by an abnormal accumulation of lymph**. It mainly affects the feet, then the ankles and calves, but rarely both legs at the same time.

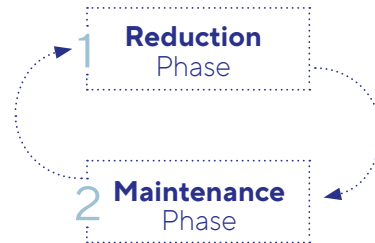
If your skin is supple but hurts when pinched, your symptoms progress to bruising and signs of venous insufficiency, this might be a lipedema because none of these signs occur in lymphedema⁽¹⁾.



(1) Vignes, Lipoedème : une entité mal connue, Journal des maladies vasculaires, 37, 213-218, 2012

How is lymphedema treated?

Lymphedema treatment is performed in 2 phases:



The reduction phase

The reduction phase is also known as the intensive decongestive treatment. Its goal is to achieve maximum reduction of the edema to come as close as possible to the volume of the opposite healthy limb.

The main treatments used during this phase are:



• **Manual Lymphatic Drainage (MLD)**, carried out by a specifically trained physiotherapist. It stimulates and facilitates the circulation of the lymph by promoting the unblocking of the lymph nodes.⁽¹⁾



• **Reducing and draining bandages** requiring the use of several bandages which can be adapted to the limb volume and repositioned at will. The aim is to reduce the volume of edema. They can be worn day and night.⁽¹⁾



• **Skin care** to prevent dermatological complications related to lymph accumulation. They limit dryness and prevent lesions.⁽¹⁾



• **Coached physical activity** under bandages. These specific exercises improve lymph circulation and allow to regain mobility and flexibility of the limb.⁽¹⁾



• **Patient education** to promote self-management and long-term control. It can include: daily skin care, exercise/movement, self-drainage (SLD), self-bandage, self-monitoring for complications and treatment adjustment according to fluctuations.

• **Psychological evaluation** performed to evaluate signs of depression, anxiety, cognitive impairment, lack of motivation, ability to cope and understanding of disease and concordance with treatment.

• **IPC (Intermittent Pneumatic Compression)** is a beneficial adjunct treatment to MLD in a multi-modality approach to control lymphedema. It is effective in removing water from the tissues but less effective towards proteins. That is why MLD remains a necessary part of the treatment.⁽²⁾

This phase duration may vary from one to several weeks, depending on the severity of the lymphedema, and can be renewed later.

The maintenance phase

As soon as a satisfying volume reduction is achieved, the maintenance phase of the lymphedema starts.⁽¹⁾

Its objective is to stabilize the volume of the reduced limb in the long term, but also to avoid relapses and to enable the patient to regain mobility.



Contain

During active time, this phase is carried out with made-to-measure patient compression garments, which help the drainage of the edema during movement.

The garments will be renewed on a regular basis under the supervision of healthcare professionals.

The compression garments contribute to:

- Facilitate lymph circulation
- Limit volume recovery



Mobilize

Daytime compression garments, due to the high level of pressure exerted, do not allow comfortable nighttime wear.

For this reason, rest and nighttime garments specially adapted for lymphedema treatment should be preferred.⁽²⁾

They allow a softer pressure to be exerted while ensuring continuous treatment during the night for more efficiency.⁽³⁾

The rest and nighttime compression garments:

- Promote lymphatic circulation
- Facilitate self-management
- Act during sleep without disrupting it



Contain/Mobilize

For the pelvic and genital lymphedema, it's necessary to have targeted compression around the pelvis and buttocks, to encourage lymphatic drainage and help maintain or reduce swelling.



(1) Institut Curie - February 2020 - <https://www.monreseau-cancerdusein.com/dossiers/mieux-comprendre/gerer-les-suites-operatoires-les-effets-indees/lymphoedeme-ou-gros-bras/traitement-du-lymphoedeme>
(2) Johns Hopkins Medicine - February 2020 - <https://www.hopkinsmedicine.org/health/treatment-tests-and-therapies/dvt-prevention-intermittent-pneumatic-compression-devices>

(1) International Lymphoedema Framework - Best practices - Observational study - September 2016
(2) Lymphoedema Framework. Best Practice for the Management of Lymphoedema. International consensus. London: MEP Ltd, 2006.
(3) Whitaker - Lymphoedema management at night views from patients across five countries - British Journal of Community Nursing - Chronic Oedema Vol 21 N°10 - October 2016

What are the possible complications?⁽¹⁾

It is important to **manage your lymphedema with care** to avoid complications. Infections are favored by the dysfunction of the lymphatic system.

The complications that patients may encounter most often are the following:

- Dry skin
- Inflammations
- Erysipelas: infection of the skin due to bacteria; it is diagnosed on an inflamed edema and is preceded or accompanied by fever or shivers
- Lymphangitis: lymphatic inflammation

How to take care of your lymphedema?

SKIN CARE AND HYGIENE^{(1) (2)}



- Wear the prescribed compression garments and bandages every day
- Disinfect wounds (if any)
- Keep skin clean with daily body wash and careful skin drying (not forgetting skin folds)
- Moisturize your skin with cream or lotions
- Do not cut or tear cuticles
- Beware of insect bites
- Avoid injuries and sunburn
- Treat all infections

CLOTHING⁽³⁾



- Change compression garments regularly – when they become slack, they become ineffective
- Avoid wearing jewelry
- Wear comfortable clothing
- Wear comfortable shoes

DIETETICS⁽¹⁾



- Obesity is a major risk factor in the development of lymphedema – it is important to maintain a healthy weight
- Eat a balanced diet
- Hydrate your body by drinking water – if possible, drink 2 liters a day



THE BENEFITS OF SPORT



(1) Cahier de l'animateur de marche nordique. Site de l'UFOLEP - December 2019 http://www.cd.ufolep.org/pyreneesatlantiques/pyreneesatlantiques_d/data_1/pdf/ca/cahierdelanimateurm.pdf
 (2) B.G. Berger, D.R. Owen. Mood alteration with swimming—swimmers really do «feel better». Psychosomatic Medicine October 1, 1983 vol. 45 no. 5 425-433. <https://www.ncbi.nlm.nih.gov/pubmed/6635105> (décembre 2019)
 (3) Pinto-Carral A, Molina AJ, de Pedro A, Ayan C. Pilates for women with breast cancer: A systematic review and meta-analysis. Complement Ther Med. 2018 Dec;41:130-140. doi: 10.1016/j.ctim.2018.09.011. Epub 2018 Sep 15. DOI: 10.1016/j.ctim.2018.09.011. <https://www.ncbi.nlm.nih.gov/pubmed/30477829> (décembre 2019)
 (4) Sener HO, Malkoç M, Ergin G, Karadibak D, Yavuzsen T. Effects of Clinical Pilates Exercises on Patients Developing Lymphedema after Breast Cancer Treatment: A Randomized Clinical Trial. J Breast Health. 2017 Jan 1;13(1):16-22. doi: 10.5152/tjbh.2016.3136. <https://www.ncbi.nlm.nih.gov/pubmed/28331763> (décembre 2019)

SPORT EXERCISES

People with lymphedema are strongly advised to engage in physical activities.

- Physical activities invigorate the muscles, thus improving blood circulation and stimulating the lymphatic system.
- The most "popular" sports when you have a lymphedema are: nordic walking, water activities, pilates, yoga and Qi Gong.

Wearing compression garments during sports sessions is associated with **several benefits demonstrated by science.**⁽¹⁻²⁾

During a sport session, blood flow is altered: blood circulation is intensified, and this can be painful when suffering from lymphedema.⁽¹⁾

Compression garments are precisely designed to limit these pains. Worn during the effort, but also during the recovery phase, they limit the occurrence of pain and edema.⁽¹⁾



Improved blood circulation



Edema risk reduction



Less post-exercise muscle pain

(1) HAS - La compression médicale dans le traitement du lymphoedème December 2010
 (2) Couzan S. et al. Le sportif, un insuffisant veineux potentiel ? Nouvelle approche - 2006

How to take care of
your lymphedema?



DAILY EXERCISES

Upper limb lymphedema:

Exercise

arm stretching exercise on the wall⁽¹⁾

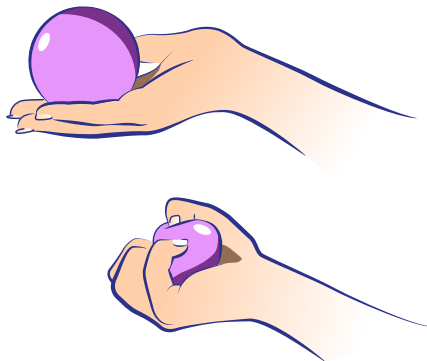


- Stand upright, well balanced, with legs slightly open, facing the wall
- Raise your arm slowly until you reach a point on the wall above your head
- Repeat this exercise slowly

Exercise

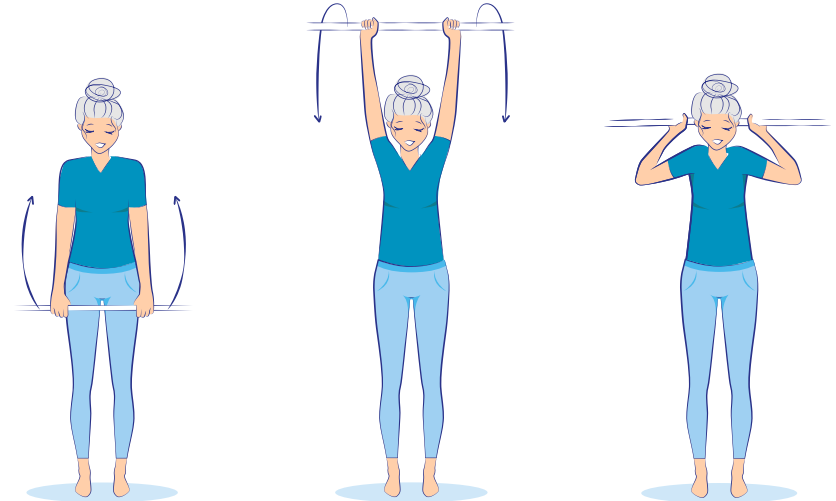
with a rubber ball⁽¹⁾

- Roll the ball in your hand on the affected side by raising your arm slightly
- Repeat this exercise regularly



Exercise

with a stick⁽¹⁾

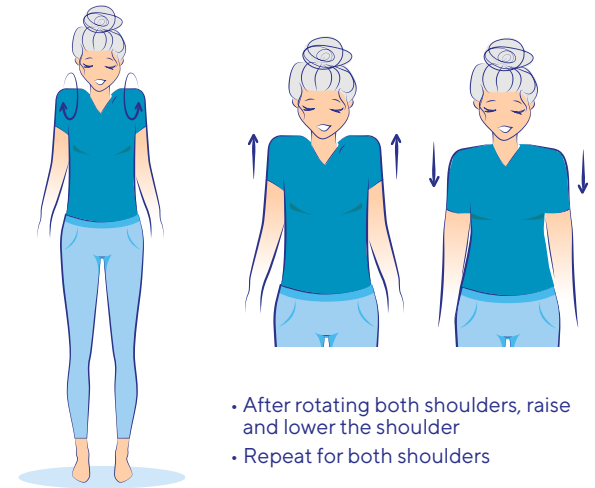


- Stand upright, well balanced, with legs slightly open
- Without bending your elbows, raise your arms and place the stick above your head
- Stop at the top and bend your arms while slowly lowering the stick behind your head, keeping it horizontal

Exercise

shoulder movement⁽¹⁾

- Stand upright, well balanced, legs slightly open
- Keep your arms at your sides and move your shoulder in small rotations



- After rotating both shoulders, raise and lower the shoulder
- Repeat for both shoulders

How to take care of
your lymphedema?

DAILY EXERCISES

Lower limb lymphedema

Exercise

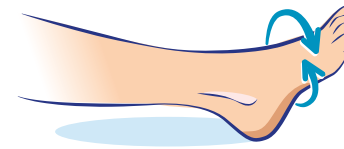
leg elevation⁽¹⁾

- Put yourself in an upright position, raising your legs on a chair, a desk, a stool... so that your heels are higher than your buttocks
- This will help promote the veno-lymphatic system



Exercise

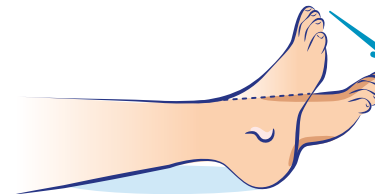
lymph circulation stimulation⁽¹⁾



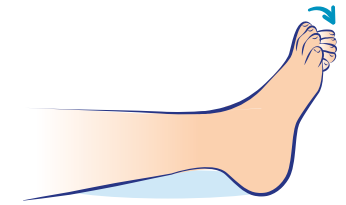
- Make circles with your foot



- Move your foot to the left and then to the right



- Stretch your foot, down, then up



- Bend and extend your toes

- Repeat these exercises (only for the leg where your lymphedema is located) several times a day, wearing your prescribed compression garments.

Which solutions to accompany you?

Thuasne accompanies you throughout your treatment and offers you solutions designed for the treatment of lymphedema.

In reduction phase

The reduction phase is usually performed using multi-component bandages⁽¹⁾

- 1 PROTECT THE SKIN**
Short-stretch cotton bandage
 In direct contact with the skin, this tubular bandage, 100% cotton, soft* and lined, offers a comfortable first layer to protect the skin weakened by lymphoedema.
- 2 MOBILIZE THE EDEMA**
MOBIDERM bandage
 Used under a reducing bandage, the **MOBIDERM** technology mobilizes edematous or indurated subcutaneous tissue.
- 3 CONTAIN**
BIFLEXIDEAL short-stretch bandage
 A short-stretch bandage (<100% stretch) as the third layer helps containment of the edema, as well as drainage in case of physical activity (high working pressure)⁽²⁾.
- 4 COMPRESS THE EDEMA**
BIFLEX bandage
 To effectively reduce oedema, a fourth compression band, Biflex, will be added to the basic set-up.
BIFLEX 16+ (light) is recommended for mild to moderate lymphedema.
BIFLEX 17+ (strong) is recommended for moderate to severe lymphedema.



Discover video tutorials
 Presenting multi-component bandage techniques
on our Thuasne YouTube channel!



USEFUL THINGS TO KNOW



STANDARD DEVICE



MADE-TO-MEASURE PATIENT DEVICE



CIRCULAR KNIT



FLAT KNIT



COMPRESSION NORMS



COMPRESSION NORMS

	CONTAIN			
	UPPER & LOWER LIMB	THORAX/PELVIS/HEAD	PELVIC/GENITAL	BREAST/CHEST WALL
SEVERE LYMPHEDEMA Stage III: Non-regular limb shape Skin folds Fibrotic consistency > 40% volume excess	LYMPHATREX Expert 	LYMPHATREX Poly/Poly strong/Fine 	MOBIDERM Intimate Shorts	MOBIDERM Intimate Bra
MODERATE LYMPHEDEMA Stage II & Late II: Regular limb shape Liquid consistency 20 - 40% volume excess	LYMPHATREX Essential 	CICATREX MADE-TO-MEASURE PATIENT 		
MILD LYMPHEDEMA Stage 0 & I: Regular limb shape Liquid consistency No skin folds < 20% volume excess	VENO ELEGANCE 	CICATREX STANDARD 		

(1) HAS - Dispositifs de compression médicale à usage individuel - Utilisation en pathologies vasculaires - Sept 2020 - Page 14

(2) Quéré - prospective multicenter observational study of lymphedema therapy: POLIT study - journal des maladies vasculaires 39 (256-263) - 2014 - Page 4

* Futura Tech - Du végétal aux textiles - Récolte, transformation et utilisation du coton



LYMPHATREX Essential

Made-to-measure patient circular knit
compression garments



For which patients

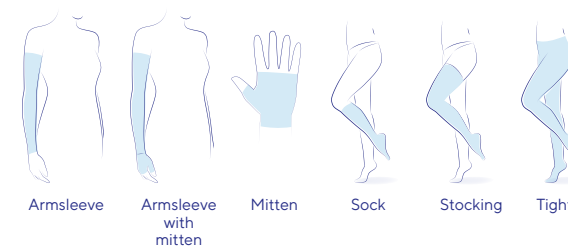
LYMPHATREX Essential garments
are recommended for patients presenting:

- Mild to moderate lymphedema⁽¹⁾
- Regular limb shape without skin folds⁽¹⁾

Benefits

- **Softness⁽²⁾**
- **Comfort⁽²⁾**: supple knit cool thermal feeling and flat seams

Models:



Colors:

Beige  Black 

Compression classes:

Class 2 (15 – 20 mmHg), class 3 (20 – 36 mmHg)

(1) SFMV – Compression et lymphœdème du membre inférieur – Comité Interface Compression – Mars 2015

(2) IFTH sensorial analysis circular knit garments – Nov 2019

VENO ELEGANCE

Standard circular knit
compression garments



For which patients

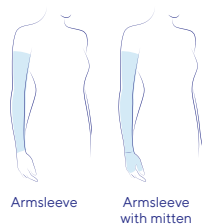
VENO ELEGANCE garments are recommended for patients presenting:

- Mild to moderate lymphedema⁽¹⁾
- Regular limb shape without skin folds⁽¹⁾

Benefits

- Thin knit for optimized compliance
- Multiple versions and sizes

Models:



Color:

Beige

Compression class:

Class 2 (23 - 32 mmHg)

LYMPHATREX Expert

Made-to-measure patient flat knit
compression garments



For which patients

LYMPHATREX Expert garments are recommended for patients presenting:

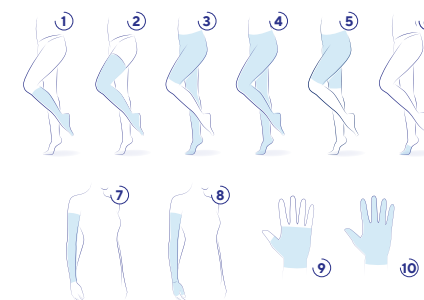
- Moderate to severe lymphedema⁽¹⁾
- Non-regular limb shape with skin folds⁽¹⁾
- Spreading to fingers or toes⁽¹⁾
- Large limb circumference⁽¹⁾

Benefits

- **Softness:** knitted from polyamide microfibre yarn, naturally soft⁽²⁾
- **Comfort:** anatomical adjustments, thermo-regulation, flat seams and sheathing knit⁽²⁾
- **Discretion and dress:** timeless and sober colors⁽²⁾

Models:

- 1 - Below-knee
- 2 - Thigh-high
- 3 - Half-tight
- 4 - Tights
- 5 - Panty
- 6 - Toe cap
- 7 - Armsleeve
- 8 - Armsleeve with mitten or glove
- 9 - Mitten
- 10 - Glove



Colors:

Beige , tanning beige and black

Compression classes:

Class 2 (15 - 20 mmHg), class 3 (20 - 36 mmHg) and class 4 (> 36 mmHg)

(1) SFMV - Compression et lymphoedème du membre inférieur - Comité Interface Compression - Mars 2015

(1) SFMV - Compression et lymphoedème du membre inférieur - Comité Interface Compression - Mars 2015
(2) ETN 280 - Dossier textile polyamide - July Aug. 2017 - page 1

LYMPHATREX

Poly/Poly strong/Fine

Made-to-measure patient flat knit compression garments



For which patients

LYMPHATREX Poly/Poly strong/Fine garments are recommended for patients presenting:

- Moderate to severe lymphedema⁽¹⁾
- Non-regular limb shape with skin folds⁽¹⁾
- Spreading to fingers or toes⁽¹⁾
- Large limb circumference⁽¹⁾

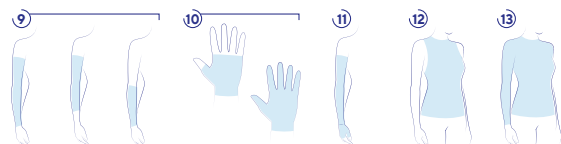
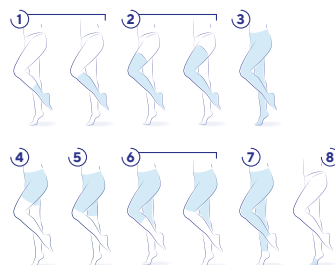
Benefits

- **Comfort:** anatomic adjustment, flat seams, sheathing knit
- **Fit:** large variety of options and models
- Large material choice

Models:

- 1 - Below-knee
- 2 - Thigh-high
- 3 - Panty
- 4 - Biker short
- 5 - Bermuda
- 6 - Capri pant
- 7 - Legging

- 8 - Toe Cap
- 9 - Armsleeve
- 10 - Mitten & glove
- 11 - Armsleeve with Mitten or glove
- 12 - Vest
- 13 - Jacket








Colors:

Beige , tanning beige  and black 

Compression classes:

Class 2 (23 – 32 mmHg) and class 3 (34 – 46 mmHg)



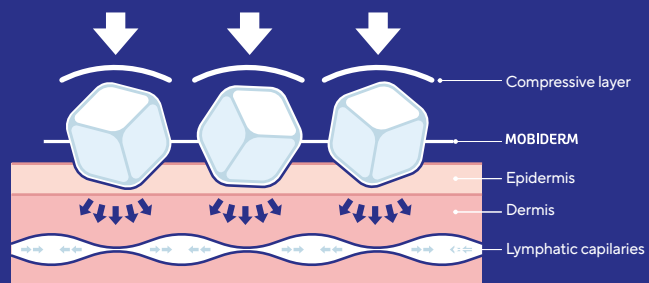
	MOBILIZE			
	UPPER LIMB	LOWER LIMB	PELVIC/ GENITAL	BREAST/ CHEST WALL
SEVERE LYMPHEDEMA Stage III: Non-regular limb shape Skin folds Fibrotic consistency > 40% volume excess	MOBIDERM MADE-TO-MEASURE PATIENT 		MOBIDERM Intimate Shorts 	MOBIDERM Intimate Bra 
MODERATE LYMPHEDEMA Stage II & Late II: Regular limb shape Liquid consistency 20 - 40% volume excess	MOBIDERM autofit 			
MILD LYMPHEDEMA Stage 0 & I: Regular limb shape Liquid consistency No skin folds < 20% volume excess	MOBIDERM STANDARD 			

(1) SFMV – Compression et lymphoedème du membre inférieur – Comité Interface Compression – Mars 2015 – page 2

MOBIDERM GARMENTS

Taking over from daytime compression and as an alternative to self-bandages, **MOBIDERM** garments continue mobilizing the lymphedema during the rest and nighttime, and thereby reinforce the effects of the daytime treatment.

These garments are made of a soft elastic material designed to deliver a soft pressure, well-accepted* in the rest and nighttime phases. They incorporate **MOBIDERM** technology that is made up of foam blocks encased between two non-woven bandages. It helps promoting lymphatic circulation with micro massages and mobilizes edematous or indurated subcutaneous tissues.



*S. Mestre, C. Calais, G. Gaillard, M. Nou, M. Pasqualini, C. Ben Amor & I. Quere. Interest of an auto-adjustable nighttime compression sleeve (MOBIDERM® Autofit) in maintenance phase of upper limb lymphedema: the MARILYN pilot RCT. Supportive Care in Cancer. 2017, (8):2455-2462





MOBIDERM Intimate Bra



For which patients

The Mobiderm Intimate Bra is recommended for patients presenting:

- Acute or chronic breast and/or chest wall edema
- Chronic infiltration after reconstruction

Benefits

- **Ready to use:** compressing lymph bra with mobilising Mobiderm pads (2 pieces) that are integrated, removable and ready for immediate use
- **Self management:** easy to put on, hook and zip front closure, softly lined integrated pockets for breast form
- **Discreet color:** light nude color, not visible even under light clothes

Model:



Color:

Nude 

Sizes/Cups:

- 70-115 (XS - XL) AA/A, B/C, D/E (UK 32-50)

Art.-No.: T57130

Compression class:

- Light compression 5-10mmHg



Discover the video tutorial with donning instructions for Mobiderm Intimate Bra **on our Thuasne YouTube channel!**



MOBIDERM Intimate Shorts



For which patients

The Mobiderm Intimate Shorts are recommended for patients presenting:

- Pelvic and genital lymphedema

Benefits

- **Improve the quality of life*** : can be worn throughout the day and night and the product is discreet
- **Easy to use** : the product is ready to wear, all-in-1 product with removable pad, and it's easy to use for 3 out of 4 patients*

Models:

Shorts Men



Shorts Women



Colors:

Black blue

Compression classes:

- 15-20 mmHg around the pelvis
- 5-10 mmHg on the abdomen and mid thighs



Discover all available video tutorials Mobiderm Intimate fitting instructions **on our Thuasne YouTube channel!**

*OLYMPY study : Exploratory study to assess the clinical benefits of wearing the MOBIDERM Intimate Short in patients with pelvic and/or genital lymphedema. - 2021 - 32 patients - n° ID-RCB: 2020-A00247-32;primary objective: assessment of the effect of the MOBIDERM Intimate short, after 12 weeks, on an overall impression of change in their quality of life in relation to PL/GL



MOBIDERM autofit

Adjustable mobilizing garment



For which patients

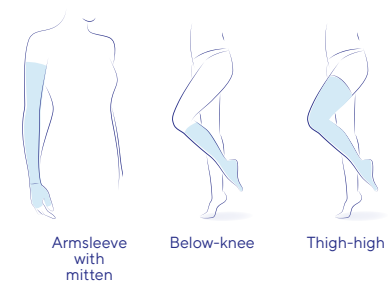
The Mobiderm autofit garments are recommended for patients presenting:

- Mild to moderate lymphedema
- Regular or non-regular limb shape
- Stable or evolutive edema

Benefits

- **Easy donning and doffing** thanks to semi-open garment ⁽¹⁾
- **Adaptation** to most patient's shape thanks to the hook and loop fasteners
- **Precise and repeatable application** with the several tightening notches.
- **MOBIDERM technology efficiency** ⁽²⁾
- **Quick delivery** ⁽²⁾

Models:



Color: Beige



Discover all available video tutorials presenting Mobiderm autofit fitting instructions **on our Thuasne YouTube channel!**

(1) Mestre-Intérêt du manchon de compression nocturne auto-ajustable Mobiderm Autofit dans la phase de maintien du traitement du lymphoedème du membre supérieur: l'étude pilote Marilyn-Support Care Cancer (25:2455-2462) -2017 - Pages 6 & 7

(2) Compared to-made-to measure products



MOBIDERM Standard

Standard mobilizing garments

For which patients

Mobiderm Standard garments are recommended for patients presenting:

- Mild to moderate lymphedema
- Regular limb shape
- Stable lymphedema volume

Benefits

- Mobiderm ⁽¹⁾ **technology efficiency** ⁽²⁾
- Quick delivery ⁽²⁾

Models:



Color: Beige 

MOBIDERM Made-To-Measure Patient

Made-to-measure mobilizing garments

For which patients

The Mobiderm **Made-To-Measure Patient** garments are recommended for patients presenting:

- Moderate to severe lymphedema
- Non-regular limb shape
- Out-of-standard sizes
- Stable lymphedema volume

Benefits

- Tailored fit thanks to made-to-measure manufacturing
- Mobiderm **technology efficiency** ⁽¹⁾

Models:



Color: Beige 


(1) Mestre -Intérêt du manchon de compression nocturne auto-ajustable Mobiderm Autofit dans la phase de maintien du traitement du lymphoedème du membre supérieur: l'étude pilote Marilyn-Support Care Cancer (25-2455-2462) -2017.

(2) Compared to Made-To-Measure products

Biflex - Indications: Venous insufficiency, simple and complicated varicose veins, reduction of venous and post-traumatic edema, dermatitis/ lipodermatosclerosis, varicose ulcers, deep vein thrombosis (prevention and confirmed accident), post-thrombotic syndrome, following sclerotherapy, treatment of lymphedema. Contraindications: PAD (peripheral arterial disease), skin wounds, abscess, infected skin conditions, extra-anatomic bypass, uncontrolled heart failure. **BiflexIdeal** - Indications: Treatment of lymphedema, simple and complicated varicose veins, following sclerotherapy, following surgery, reduction of post-traumatic edema, varicose ulcers. Contraindications: Do not apply directly to an open wound. **Biplast** - Indications: Traumatology (joint or muscle compression sprain, dislocation, tendinitis), phlebology (reduction and stabilization of edema), phlebology. Contraindications: Do not apply the product in direct contact with broken skin. **Lymphatrex Essential** - Indications: Lymphatrex Essential compression devices are indicated in the treatment of primary or secondary lymphedema of the upper or lower limbs. Class 2: additional treatment for the lymphedema maintenance phase. Class 3: during the maintenance phase, after initial reduction of the affected limb, to maintain the reduced volume. Contraindications: Do not use Lymphatrex Essential compression devices in the event of: known allergies to the materials used, weeping or major dermatological conditions of a limb concerned, phlegmasia cerulea dolens (painful blue phlebitis with arterial compression) of a limb concerned, septic thrombosis of a limb concerned. Do not use Lymphatrex Essential lower limb compression devices in the event of: advanced diabetic microangiopathy (for compression > 30 mmHg), heart failure, peripheral artery disease (PAD) with ankle-brachial pressure index (ABPI) < 0.6. The risk/benefit ratio must be regularly reassessed by a healthcare professional in the event of: PAD with ABPI between 0.6 and 0.9, advanced peripheral neuropathy, weeping or eczematous dermatitis. **Lymphatrex Expert** - Indications: Lymphatic diseases (primary and secondary lymphedema of the lower or upper limbs); venous diseases (varicose veins, edema, following phlebological surgery and sclerotherapy, pigmentation, venous eczema, healed ulcer, deep vein thrombosis, severe venous disorders during pregnancy, treatment of superficial and deep vein thrombosis, prevention and treatment of post-thrombotic syndrome). Contraindications: peripheral arterial disease (PAD) with ankle-brachial index (ABI) < 0.6; advanced diabetic microangiopathy (for compression > 30 mmHg); phlegmasia cerulea dolens (painful blue phlebitis with arterial compression); septic thrombosis. The risk/benefit ratio must be regularly re-assessed in the event of: PAD with ABI between 0.6 and 0.9; advanced peripheral neuropathy; exudative or eczematous dermatitis; intolerance to the fibres used. **Lymphatrex** - Indications: Lymphedema, lipedema, lipo-lymphedema, phlebo-lymphedema, congestion conditions following immobility (arthrogenic congestion syndrome paresis and partial paresis of the extremity). Contraindications: advanced peripheral arterial occlusive disease, decompensated heart insufficiency, cardiogenic edema due to heart insufficiency, myocardial infarction, lung edema, wetting dermatoses, sensitivity disorders, advanced peripheral neuropathy, primary chronic polyarthritis. **Mobiderm Pads & Bandages** - Indications: Acute or chronic edema management (e.g. lymphedema). Contraindications: skin infection of the limb or acute inflammation, known allergy to components used, septic thrombosis, severe peripheral neuropathy of the limb. Lower limb - PAD (peripheral arterial disease) of lower limbs with ABPI < 0.6, congestive heart failure, advanced diabetic microangiopathy, phlegmasia cerulea dolens, extra-anatomic bypass. Upper limb - pathology of brachial plexus, vasculitis of the extremities. **Mobiderm Autotif, Standard and Made-to-Measure garments** - Indication: Maintenance of volume reduction in lymphedema. Contraindications: Skin infection of the limb or acute inflammation, known allergy to components used, septic thrombosis, severe peripheral neuropathy of the limb. Lower limb - PAD (peripheral arterial disease) of lower limbs with ABPI < 0.6, congestive heart failure, advanced diabetic microangiopathy, phlegmasia cerulea dolens, extra-anatomic bypass. Upper limb - pathology of brachial plexus, vasculitis of the extremities. **VENO Elegance** - Indications: Soft indentable lymphedema (stage I), arm edema following breast cancer surgery and radiotherapy, post-surgery and post-traumatic edema. Contraindications: Advanced peripheral artery occlusive disease, decompensated cardiac insufficiency, septic phlebitis, phlegmasia cerulea dolens, weeping dermatoses, compression material intolerance, paresthesia, advanced peripheral neuropathy, primary chronic polyarthritis. **Mobiderm Intimate Bra** - Indications: Acute or chronic edemas of the breast and/or the chest wall, post-operative edemas or edemas after radio therapy (only on intact skin), chronic infiltration after reconstruction, remaining chronic chest wall edemas. Contraindications: Allergic or inflammatory skin changes (e.g. swelling, reddening of the body area to be cared for). Use only on intact skin, not on infected or acutely inflammatory skin. Please consult with the treating physician regarding the indication and wearing mode of this orthopedic aid. **Mobiderm Intimate Shorts** - Indication: Treatment of pelvic and genital lymphedema. Contraindications: Skin infections on the pelvis or legs; Pregnant women (from the first month); Known allergies to any of the components; Lower limb peripheral arterial disease (PAD) with ankle brachial index (ABI) < 0.6; Decompensated heart failure; Septic thrombosis of the proximal veins; Phlegmasia cerulea dolens (painful blue edema with arterial compression) in the thighs; Posthectomy (circumcision) within the past three months; Female patient with marked localized edema of the labia minora only. Foam bandages and Varico products contain latex



LYMPHATREX Essential, LYMPHATREX Expert, Cicatrex (ASQUAL standard), MOBIDERM, BIFLEX, Biplast, BIFLEXIDEAL, KITBIFLEX, bandages accessories:

CE  **Thuasne**
120 rue Marius Aufan
92300 Levallois-Perret - France

VENO Elegance, LYMPHATREX, LYMPHATREX poly/ poly strong/ fine, Cicatrex (RAL standard), MOBIDERM Intimate Bra:

 **Thuasne Deutschland GmbH**
Im Steinkamp 12
30938 Burgwedel - Deutschland

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