A presentation slide with a blue header and a white background. The header contains the text 'CASE STUDY' in white. Below the header, the text 'presented by' is followed by 'MICHEL EID, Lymphedema therapist Vodder School Teacher'. At the bottom, there are three small text elements: '© Physio Extra 2014', '1', and 'Michel Eid, Oct. 2014'.

**CASE STUDY**

presented by

MICHEL EID,  
Lymphedema therapist  
Vodder School Teacher

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A presentation slide with a blue header and a white background. The header contains the text 'Potential conflict of interest:'. Below the header, there is a list of items under the heading '\* Invited speaker for:'. The list includes '\* Physio Extra', '\* Jobst', and '\* Medi- Valco'.

**Potential conflict of interest:**

- \* Invited speaker for:
  - \* Physio Extra
  - \* Jobst
  - \* Medi- Valco

# What is lymphedema?



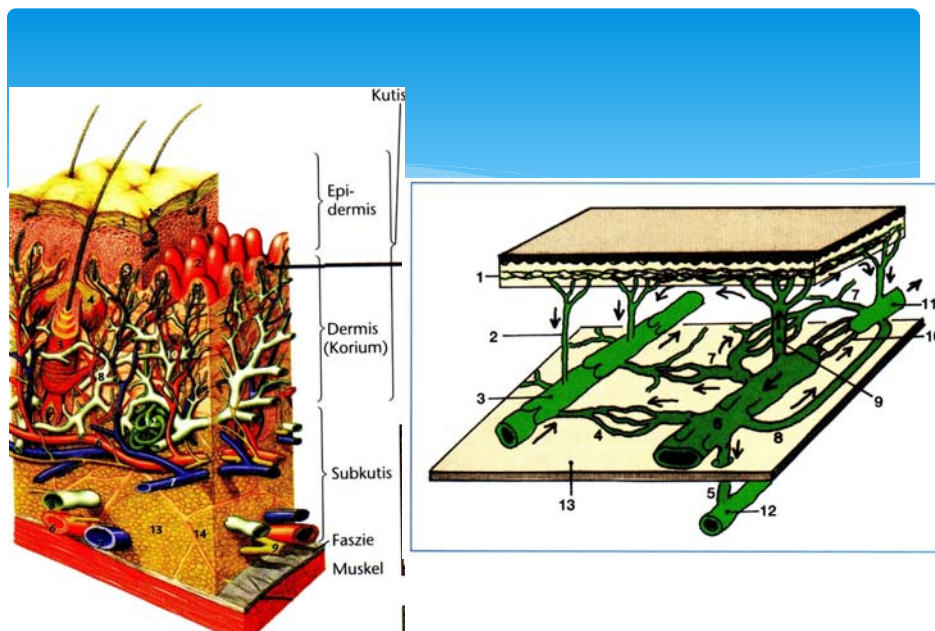
\* Lymphedema is an accumulation of protein rich fluid in the interstitium of the skin caused by an insufficiency in the lymph vessel system.

\* This condition can develop when lymphatic vessels are missing or impaired (primary), or when lymph vessels are damaged or lymph nodes removed (secondary).

\* Staged 1, 2 & 3

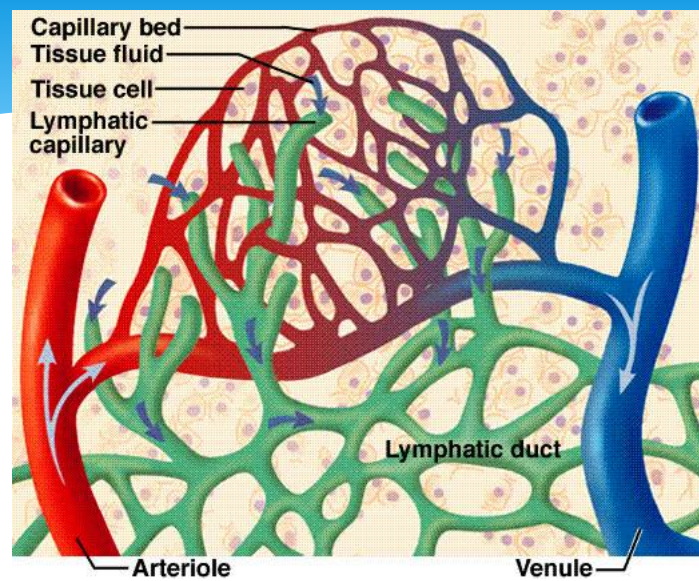
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- \* When the impairment becomes so great that the lymphatic fluid exceeds the lymphatic transport capacity, an abnormal amount of protein-rich fluid collects in the tissues of the affected area.
- \* Left untreated, this stagnant, protein-rich fluid not only causes tissue channels to increase in size and number, but also reduces oxygen availability in the transport system, **interferes with wound healing**, and provides a culture medium for bacteria that can result in infection.

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## What is lipedema?



- \* A chronically progressive, symmetrical accumulation of fat in the subcutaneous tissue with orthostatic edema occurring almost exclusively in women. Primarily the lower extremities are affected.
- \* Lipedema is characterized by tenderness & easy bruising.
- \* Staged 1, 2 & 3

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## What is phlebolympheoedema? (chronic venous-lymphatic insufficiency)



- \* Edema of the extremities caused by a lymphatic lesion which is the result of chronic venous insufficiency (CVI) generated by post-thrombotic syndrome (PTS), primary varicosis, lack of valves or angiodisplasia.
- \* Untreated venous insufficiency can progress into a combined venous/lymphatic disorder which is treated in the same way as lymphedema.

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- \* Lymphedema can be associated with conditions such as chronic venous insufficiency, resulting in phlebo-lymphedema. It can also be associated with impaired fat deposition as in lipo-lymphedema.
- \* Lymphedema is a chronic condition that can be successfully managed with on-going maintenance Combined Decongestive Therapy.

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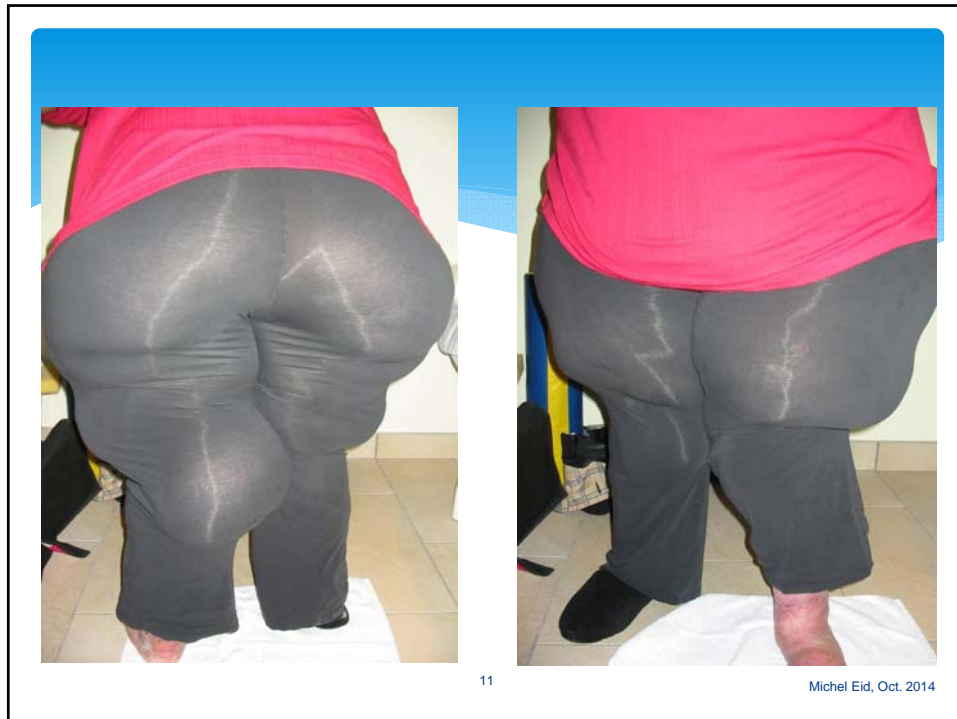
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## Case study

- \* 63 y.old female who has been suffering with ulcerations for ~ 18 years. The origin is a phlebo-lipo-lymphedema, deteriorated by cellulitis, open wounds, non-compliant patient & non recognition of her condition by the provincial health system.
- \* I treated her left leg only.

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## Treatment plan

- \* The first goal of the patient is to treat the ulcerations, secondly reduce the pain, thirdly the lymphedema.
- \* First 3 weeks, 5 txs / week, next 2 weeks, 3 txs / week.
- \* MLD, L.E. lower limb protocol, MLD around the wound area (thumb circles) + bandages (foot to knee).
- \* Patient would make her wound dressing & bandages before I would apply L.E. bandages.



## Compression hosiery

- \* Patient is now wearing knee high compression Medi Mondri® stocking with silver knit, 30-40mmHg from ankle to mid leg. Flat knit.

14      Michel Eid, Oct. 2014

The slide features a blue header with the title "Compression hosiery". Below the header, there is a single bullet point providing information about the patient's current treatment. The slide is numbered 14 and includes the name "Michel Eid, Oct. 2014" in the bottom right corner.



## Case study

- \* 43 y.old female patient that had radical modified mastectomy on left breast for breast cancer tumor, followed immediately by a reconstruction using an expander. This was in Oct. 2013.
- \* Post-op: hemorrhage, Penrose drain placed in the thorax during 6 weeks. During this period of time she developped an infection.
- \* In December, she had a second surgery to remove expander & removal of Penrose drain. She then had her second episode of infection, development of a wound, thick liquid coming out of it, changed daily wound bandages. Took antibiotics for 14 days.
- \* January 2014, third surgery to try to close the wound: not successful. Wound 15cm deep, becoming complicated to treat. Patient now has « mèches » installed.

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- \* February 2014, patient started MLD treatments, 4x/week for 2 weeks, then 3x/week for 2 weeks & then 2x/ week for 2 more weeks. Compression was done with a Medi lymph pad under a compressive bra but on top of wound bandages.
- \* After these 6 weeks, important reduction of oozing liquid had occurred, changing of bandages & « mèches » every third day instead of every day. Following visit with treating physician, confirmation of increased vascularisation & granulation, growth of epithelial cells. Wound closed by 75% in width & 50% in depth. No more usage of antibiotics.
- \* Keeps coming 1x/week for another 6 weeks.
- \* In June 2014, she receives confirmation by treating physician & wound care nurse that the wound is totally closed.

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## Conclusion

- \* Effective wound care in lymphedema patients **always includes compression therapy.**
- \* Wound healing cannot occur without a reduction of the protein load in the interstitium.
- \* Reduction of the edema usually has a positive effect on wound healing, as it improves the supply of nutrients, lymphocytes and growth factors to the cells as well as the removal of degradation products.
- \* A sustained edema reduction is essential for preventing disruptions in wound healing.

# Sources

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