Painful Legs

When its not Polyneuropathy or PVD

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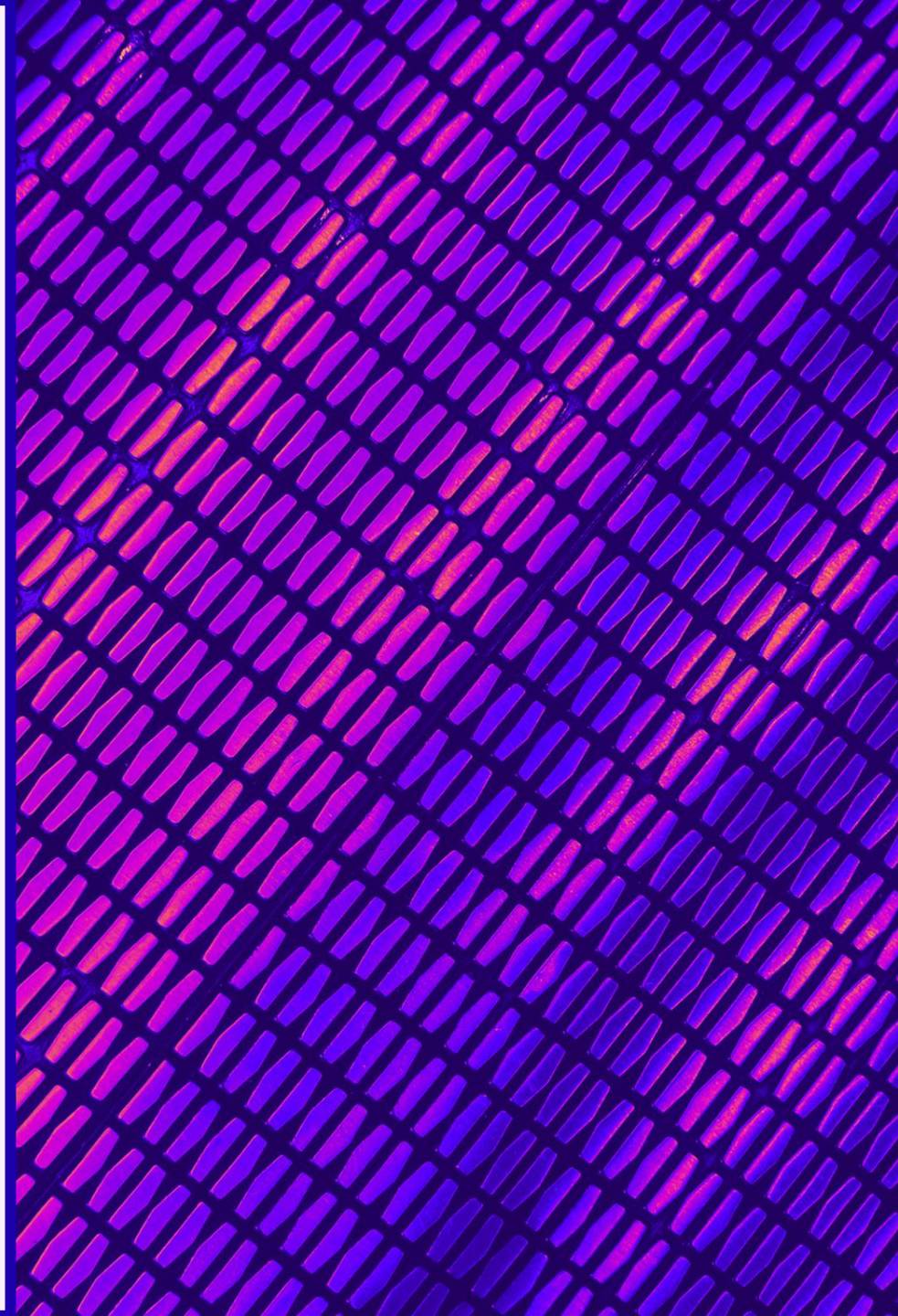
Conflicts & Declarations

- There are unfortunately very few interventions specific to lipedema management.
  - Therefore, most interventions discussed are ‘off-label’ or suggested at the Level C or Expert Consensus level.
  - Please consider this when prescribing or suggesting interventions for your patients.

- I have no other conflicts of interest to declare.



Objectives

1. Define lipedema and explore the phenotype to help improve diagnostic accuracy.
2. Understand how lipedema diagnoses differs from other common presentations of leg pain.
3. Consider management strategies available in our region, and available opportunities for more targeted therapies.

The Case of the Painful Legs

- 52F referred for bilateral lower limb pain and dysfunction, query polyneuropathy.

- PMH (per PCP): HTN
- Blood work sent:
  - A1c 5.8%
  - B12, TSH, kidney function, liver function, CRP all WNL

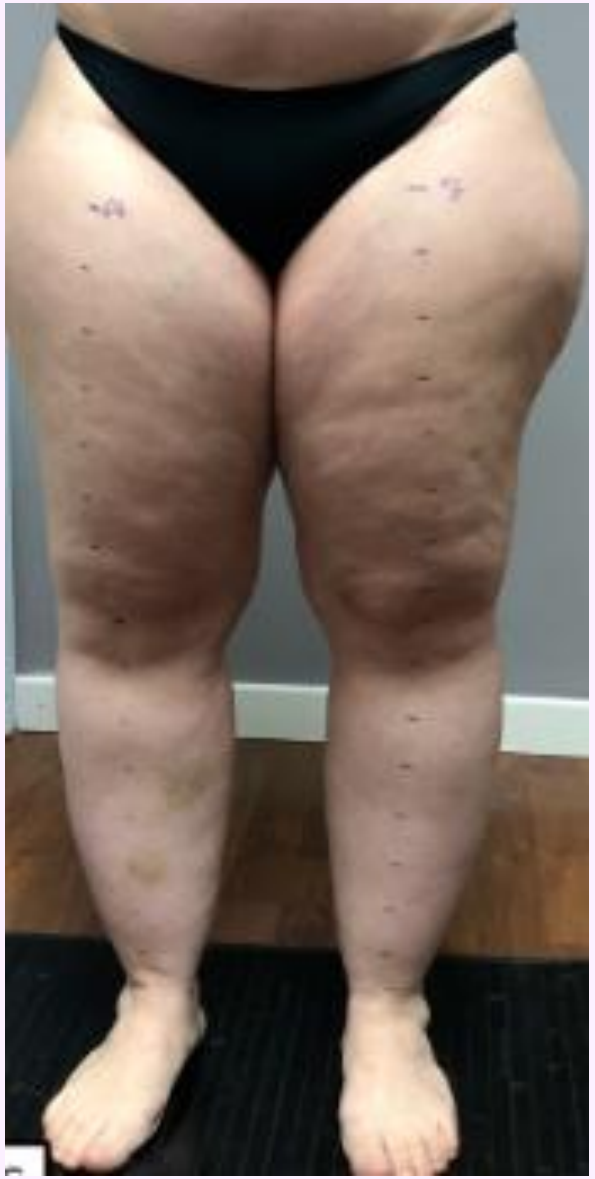

SEVERAL
MONTHS
LATER...

The Case of the Painful Legs

- Bilateral leg pain with ambulation and at rest (no real difference)
- Has progressed from just lower legs to now include thighs.
  - Did not start with feet – they're relatively normal.
- Pain limits function: Difficulty being active due to a feeling of 'fatigue', 'heaviness' and overall discomfort.
- Denies paresthesias, no balance concerns.
- LBP but no radicular features.
- Negative grocery cart sign, no subjective weakness.

The Case of the Painful Legs

TLDR
no neuro features, no evidence of PAD/PVD



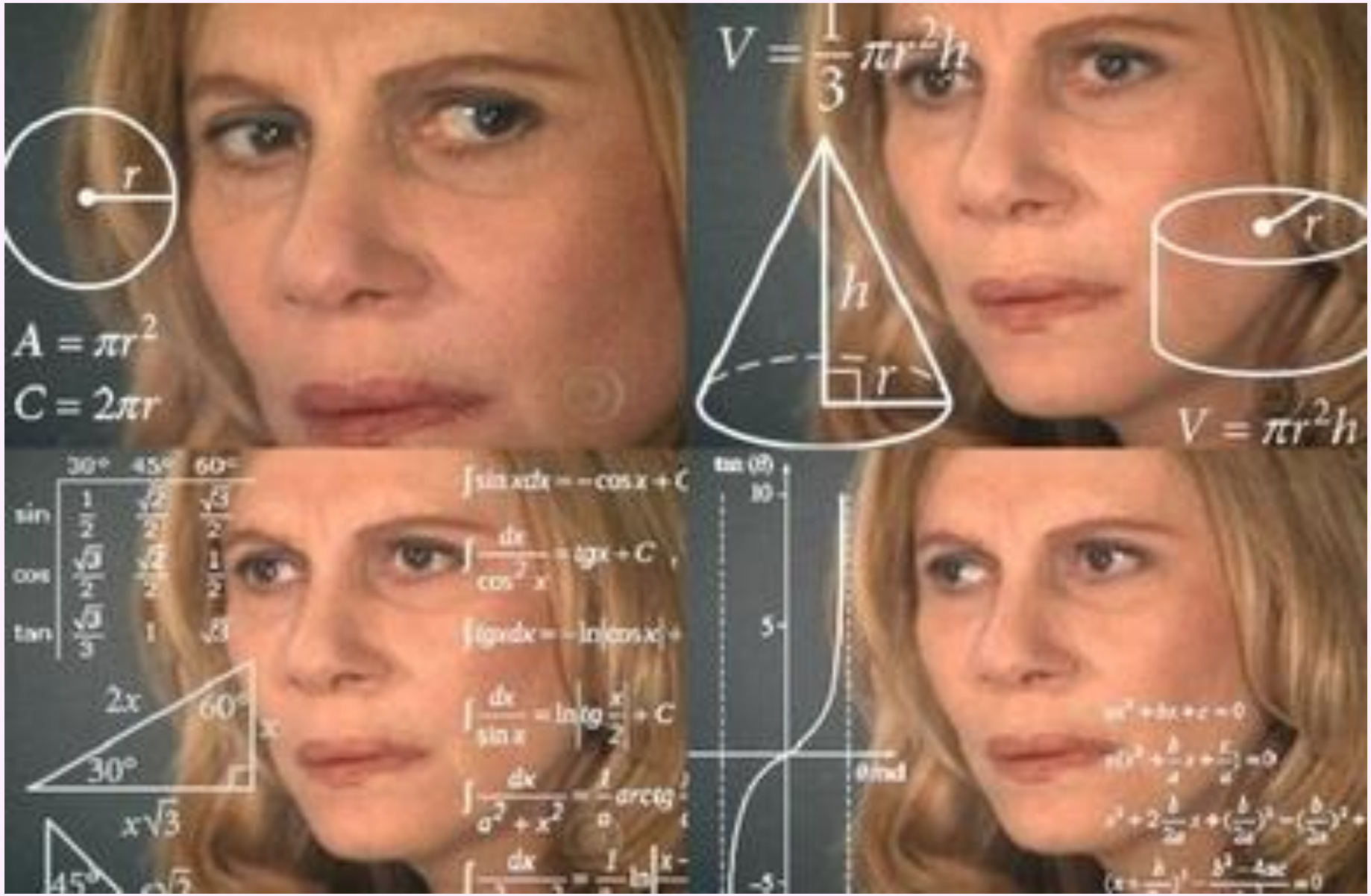
On Exam:

- Inspection: large lower body habitus, spider nevus. Few, small bruises. Genu valgum, pes planus.
- Normal gait, normal balance (including tandem)
- Normal tone and power in all myotomes.
- Reflexes 2+ symmetric throughout, including Achilles'. Babinski down.

- Tenderness to palpation of legs, non-length-dependent, non-dermatomal or peripheral nerve distribution.
- Hyperalgesia/ Allodynia throughout legs, non-length-dependent, non-dermatomal.
- No appreciable pitting edema, PPP.
- Beighton Score: 7

The Case of the Painful Legs

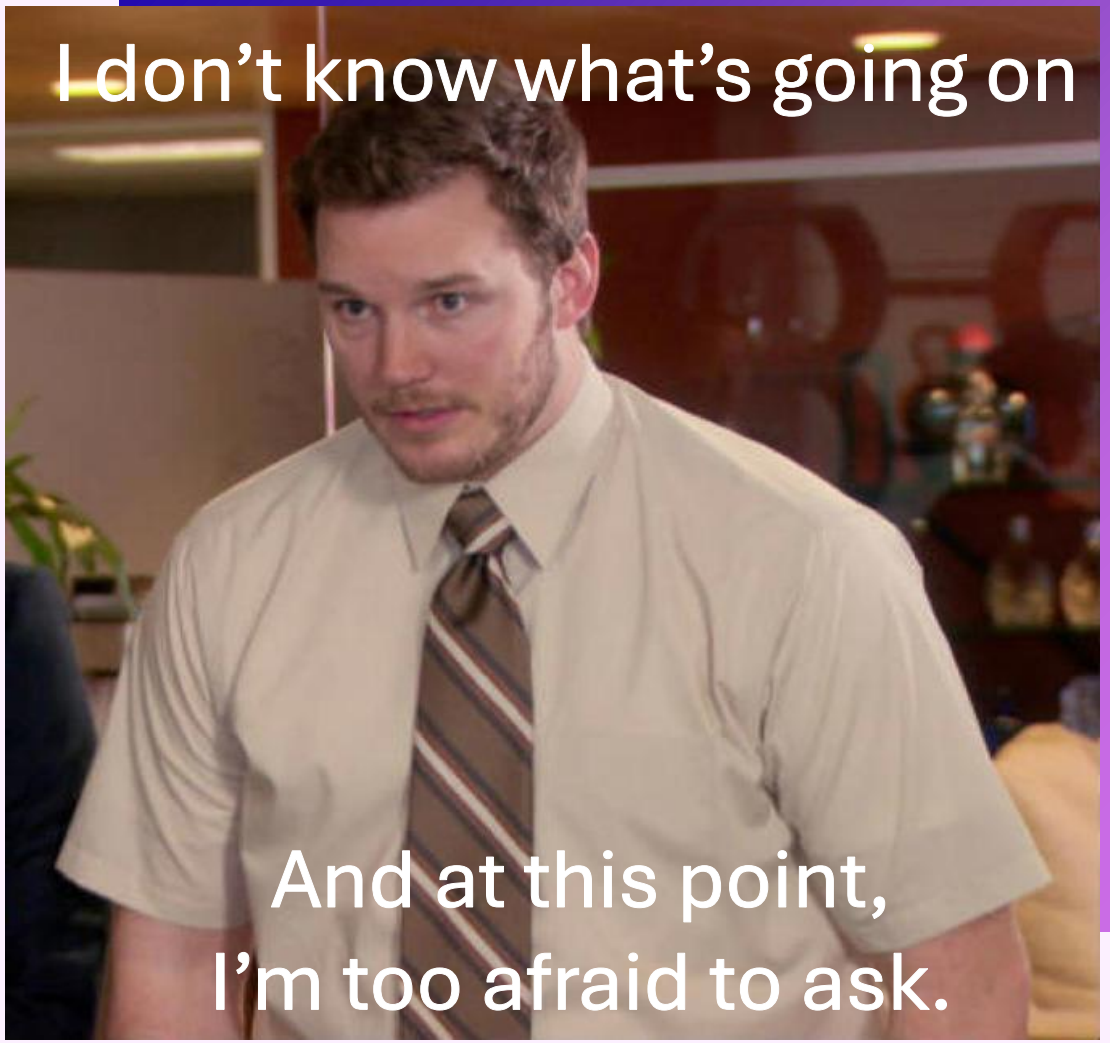
- Nerve Conduction Studies [Normal]
  - Sural amplitude 6.0uV, superficial peroneal 3.5uV with normal latencies; EDB and AHB normal without slowing.
  - Sural to radial ratio >0.4 [normal]


r
$A = \pi r^2$
$C = 2\pi r$
$V = \frac{1}{3}\pi r^2 h$
h
r
r
$V = \pi r^2 h$
30° 45° 60°
sin
cos
tan
2x
60°
30°
$x\sqrt{3}$
45°
$\int \sin x dx = -\cos x + C$
$\int \frac{dx}{\cos^2 x} = \operatorname{tg} x + C$
$\int \operatorname{tg} x dx = -\ln|\cos x| + C$
$\int \frac{dx}{\sin x} = \ln\left|\operatorname{tg}\frac{x}{2}\right| + C$
$\int \frac{dx}{a^2 + x^2} = \frac{1}{a}\operatorname{arctg}$
$\int \frac{dx}{} = \frac{1}{} \ln|x -$
tan (tf)
10
5
-5
θ rad
$ax^2 + bx + c = 0$

The Case of the Painful Legs

Opted to treat her bilateral knee OA

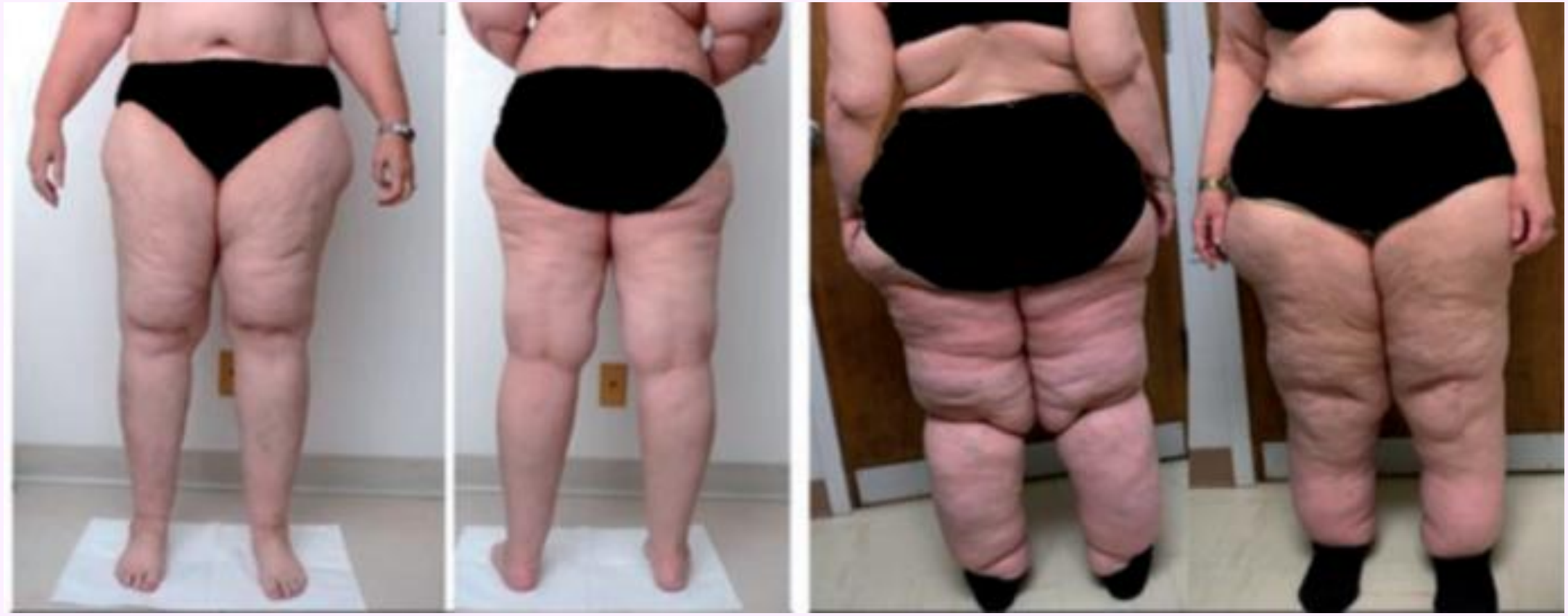
Pain improved "*maybe* 20%"



Lipedema

"a chronic incurable condition involving a pathological build-up of adipose tissue" (Allen & Hines, 1940)

≠ adiposis dolorosa (aka Dercum's)



Why Should We Care?

Prevalence estimates suggest 6-8% of all women
15-19% of women in vascular clinics

AVOID SECONDARY COMPLICATIONS

DISEASE SPECIFIC MANAGEMENT

EMPOWER PATIENTS
(SELF-DIRECTED CARE)

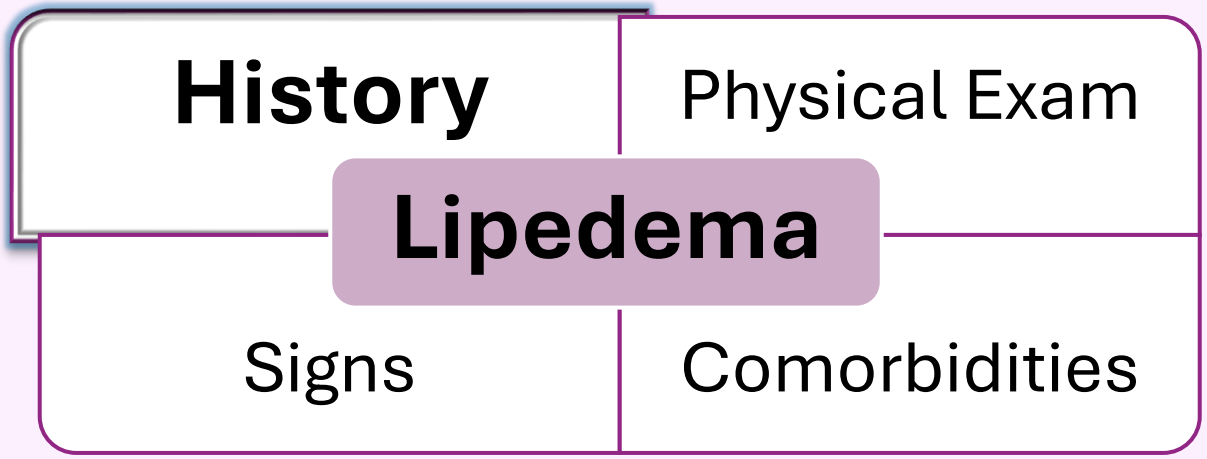
History

Physical Exam

Lipedema

Signs

Comorbidities

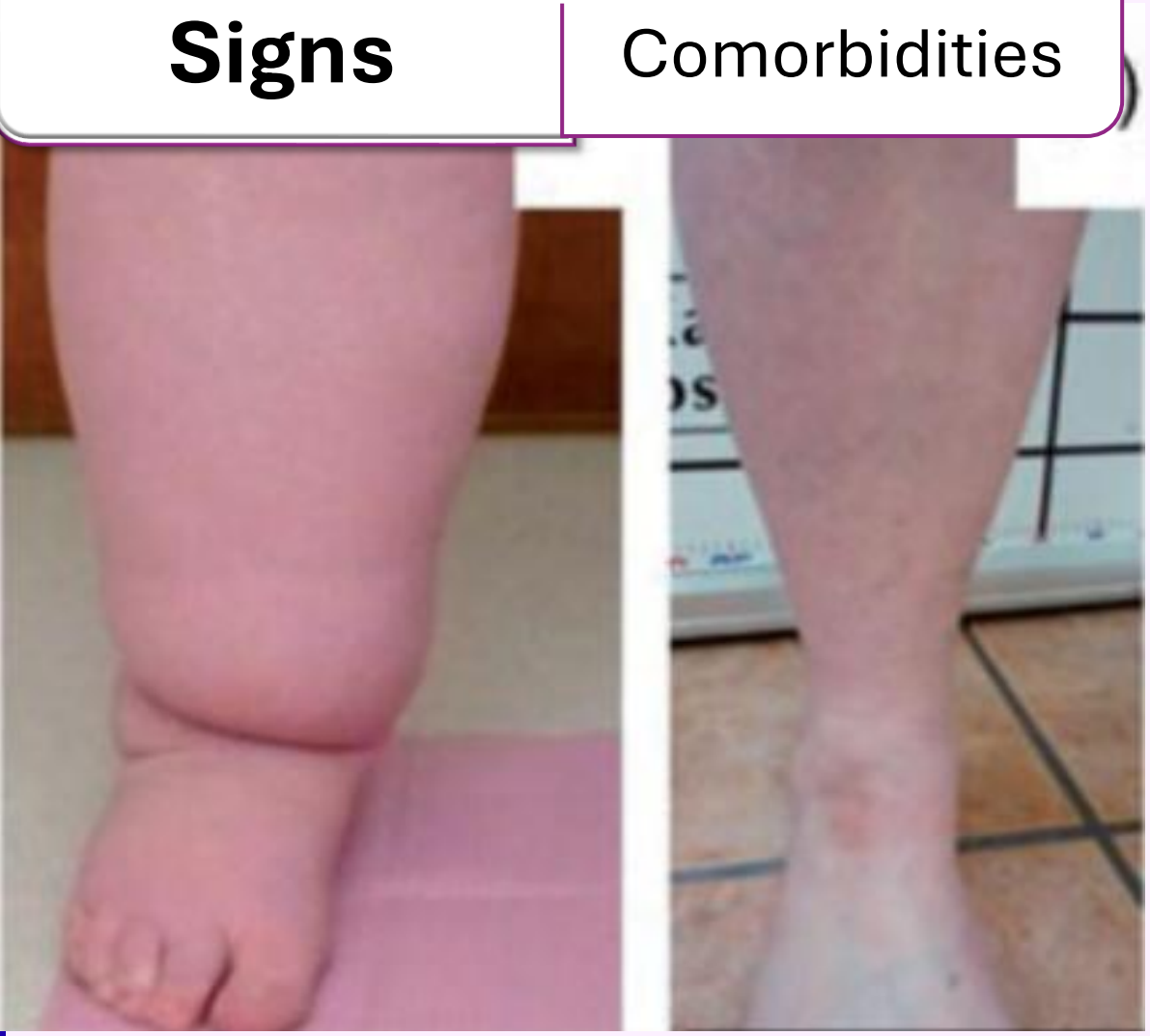


- Begins with hormonal change
  - Puberty
  - OCP use
  - Pregnancy
  - Menopause
- Female >>>>> Male
- Insidious tissue enlargement, symmetric.
  - Legs more often than arms.
  - Depending on guideline – can or cannot include abdomen.
- Difficulty losing weight (‘not responsive to dieting’)
- Affected family members.
- Hyperlaxity

History | Physical Exam

Lipedema

Signs | Comorbidities



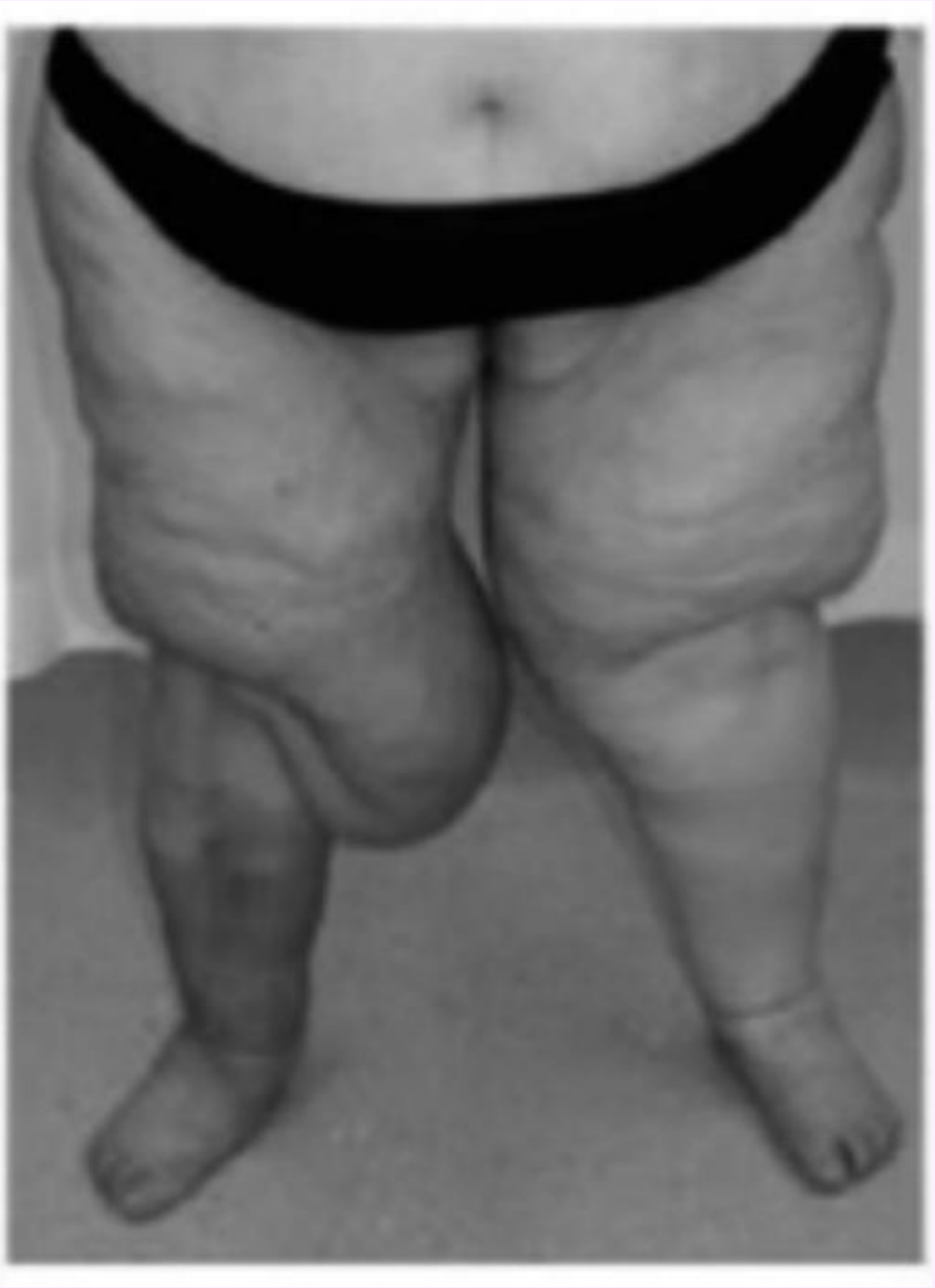
- Pain, hypersensitivity/ tenderness to touch or pressure.
- Easy Bruising, vascular fragility.
- Skin is ‘cool to touch’
- Persistent enlargement of segment despite elevation.
- *Spares* the feet/ hands.
- May include or be *isolated to* the upper limb segments.

History | Physical Exam

Lipedema

Signs | Comorbidities

- Typically “columnar”
  - Affects the segment and limb
- May be “lobar”
  - Bulges of fat in more focal areas.



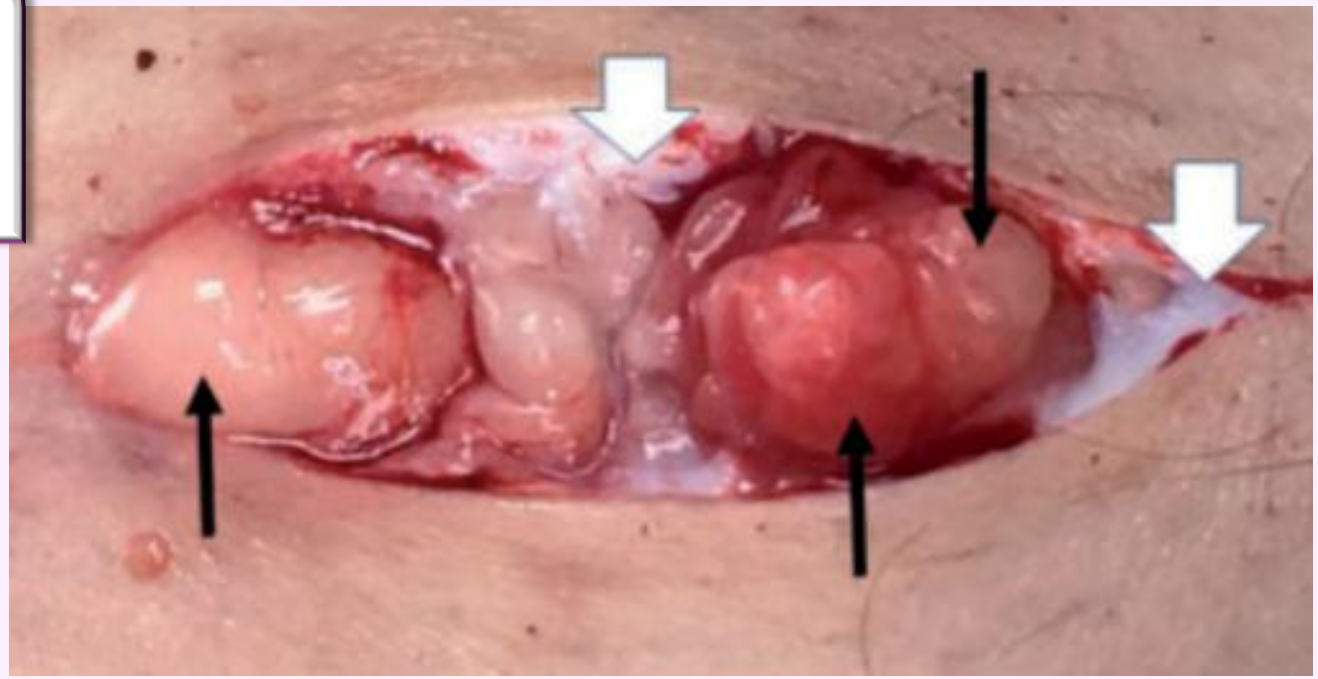
History

Physical Exam

Lipedema

Signs

Comorbidities



- Disproportionately increased loose adipose tissue on limbs.
- Symmetric
- Palpable nodules
- Tender to palpation
- No excess adiposity or nodularity on hands/ feet
- Cutaneous hypothermia, livedo reticularis.

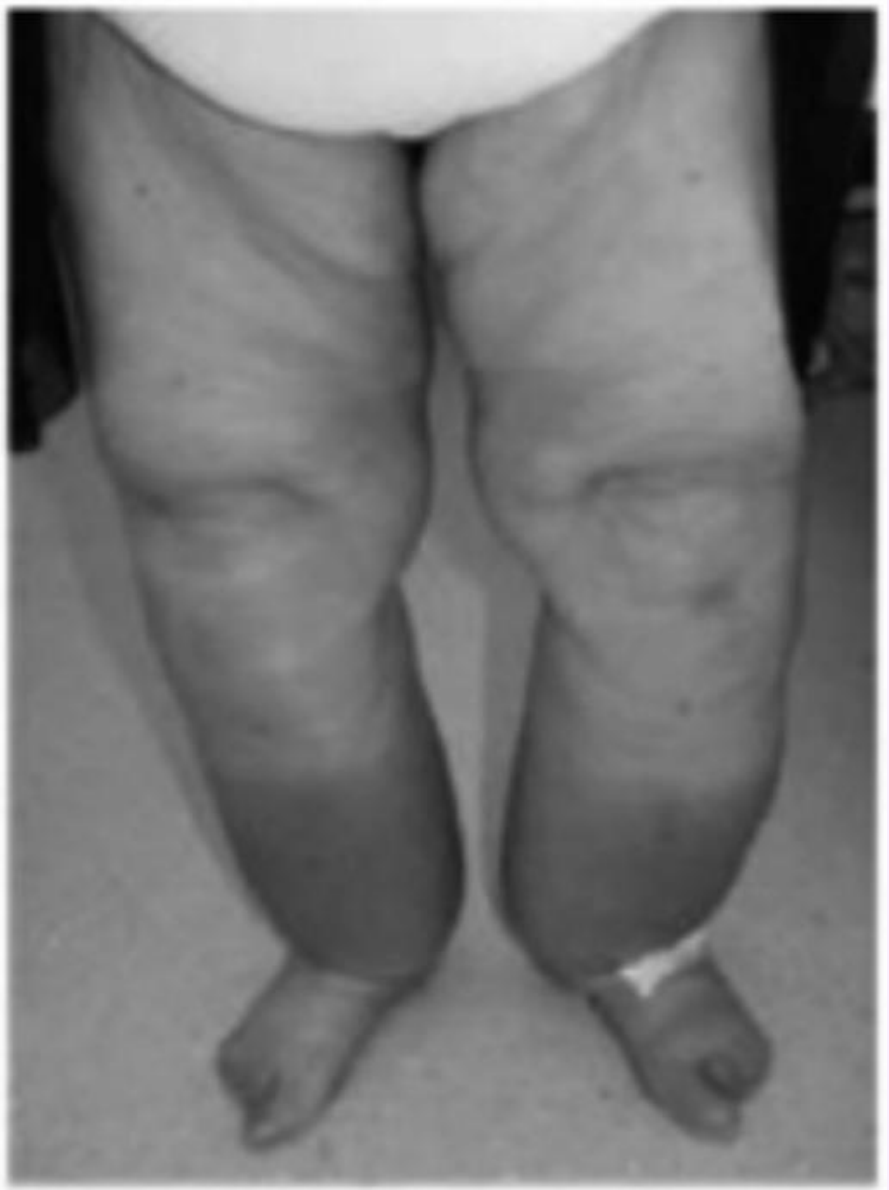
Pitting edema and central adiposity *may or may not* be present

History | Physical Exam

Lipedema

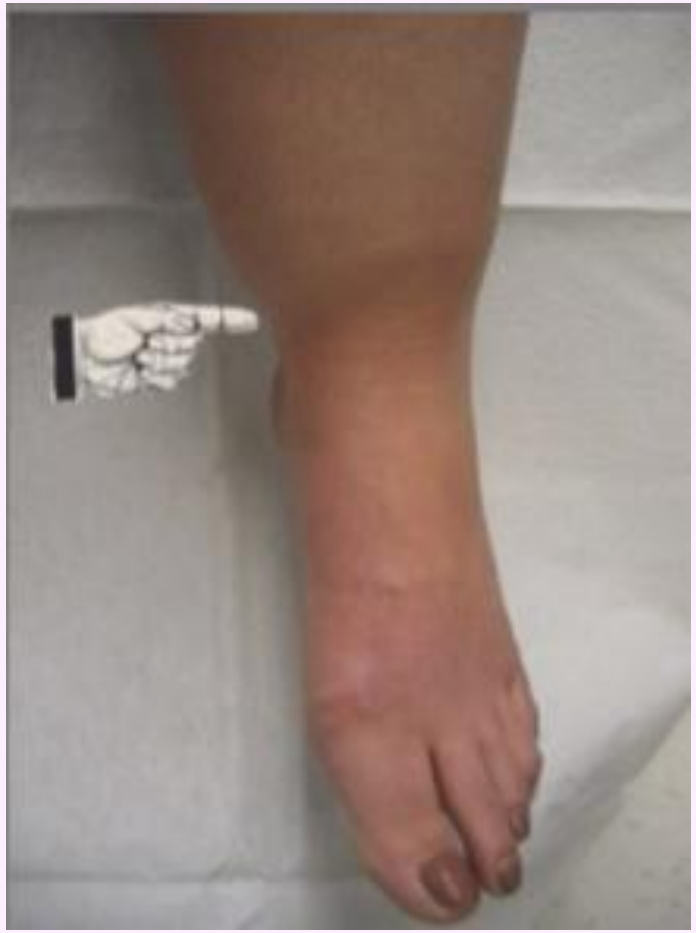
Signs | **Comorbidities**

- Lymphedema
- Obesity
- Vascular disease
- Skin breakdown
- Osteoarthritis, joint misalignment.
- Depression, anxiety, eating disorders



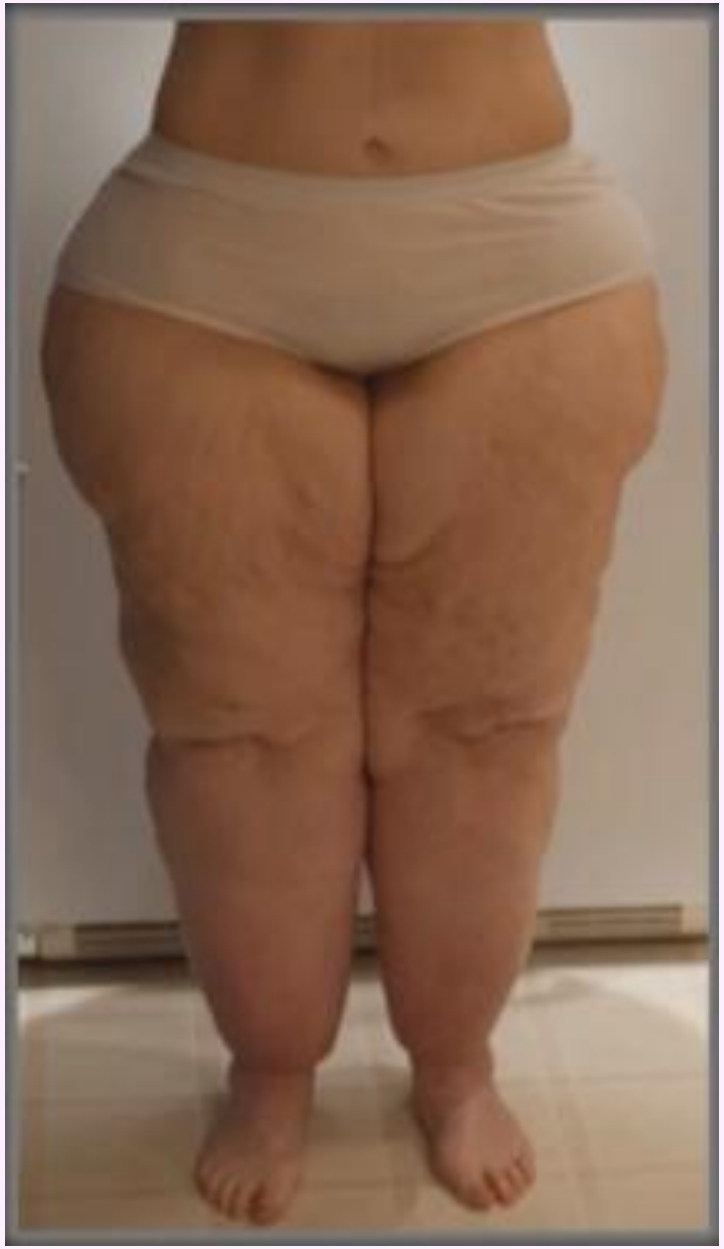
	Lipedema	Lymphedema	Venous Insufficiency	Fibromyalgia
Symmetry	Yes	Often no	Yes	Atypical
First location of discomfort	Anterior shank Thighs, Buttock	Distal or n/a	None	Anywhere, Migratory
Edema Exam	Non-specific	Stemmer's Sign	Pitting	No
Skin Changes	Easy bruising Nodules Soft/ loose skin	Discolouration Sclerosis (thick, tight)	Varicosities Hyperpigmentation Ulceration Consistency normal	Normal
Effect of Limb Elevation	None	Effective early	Effective	None
Hx of Cellulitis	No	Often	Yes	No

This is NOT Obesity



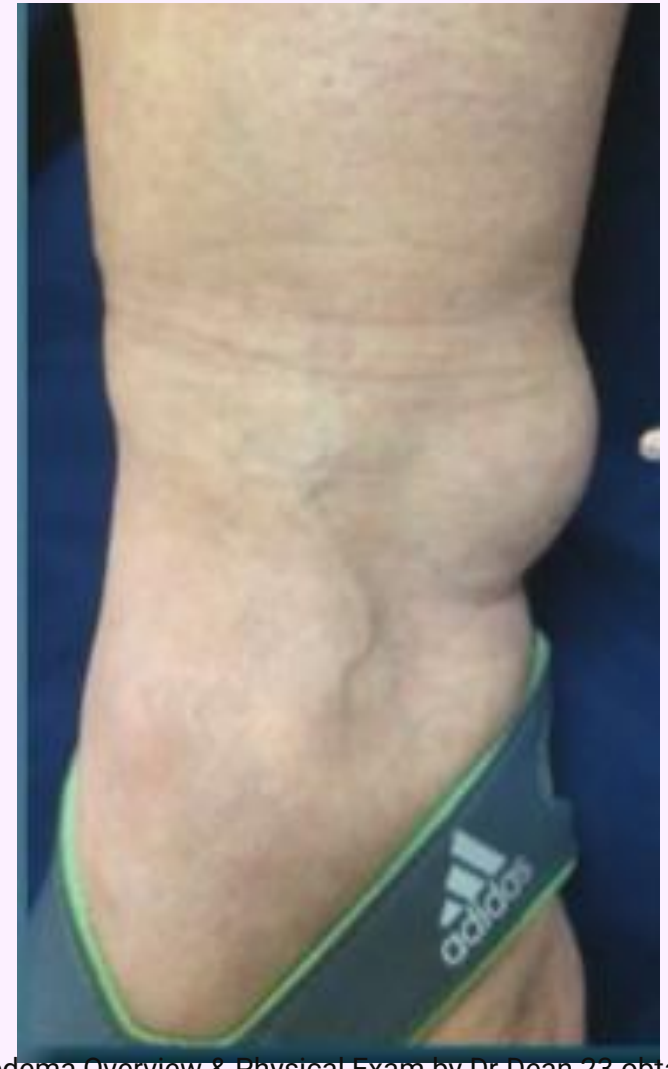
Sparing of the foot

Sparing of the Trunk



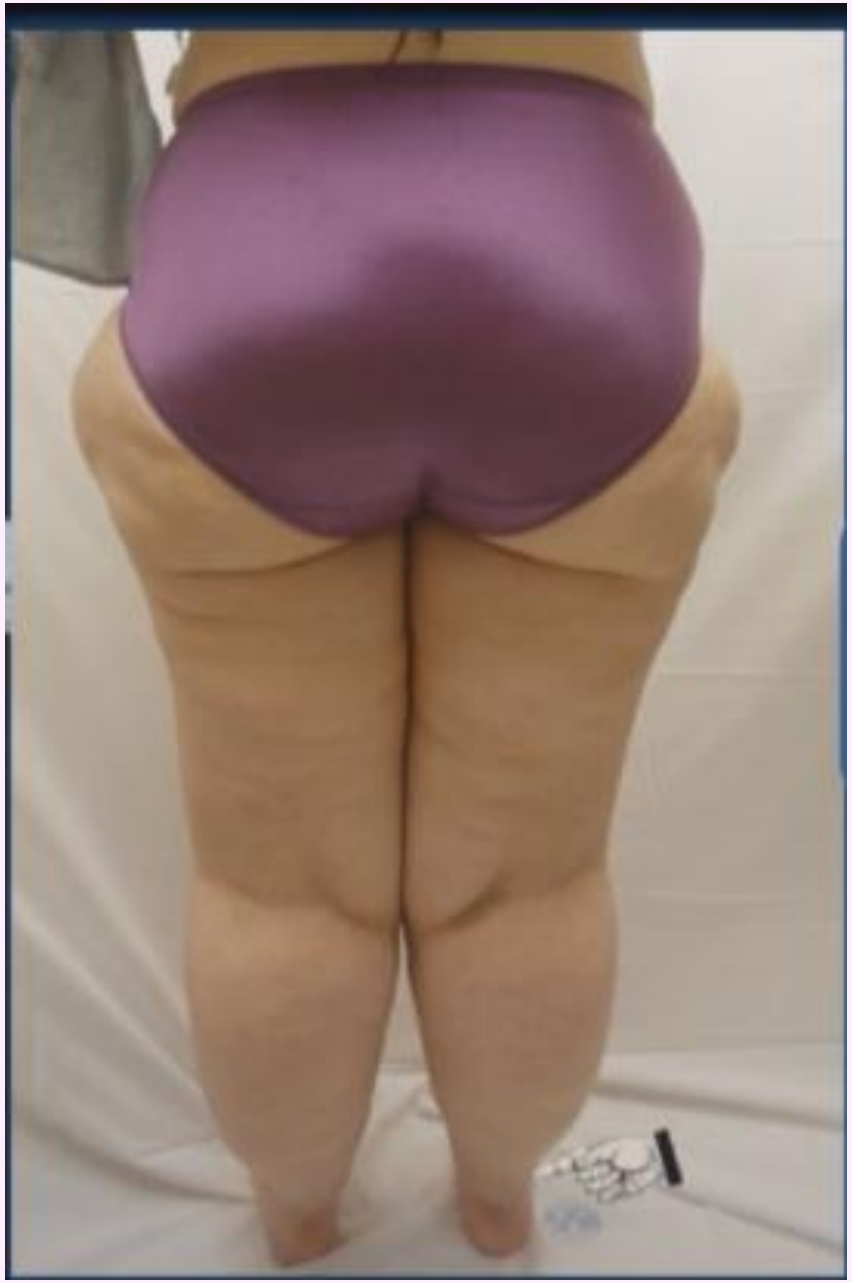
Lipedema Overview & Physical Exam by Dr Dean 23 obtained from https://www.youtube.com/watch?v=3FEfVCMK0gk

This is NOT Obesity



Malleolar “Fat Pad Sign”
Lateral > Medial

Fat filling in the retromalleolar space



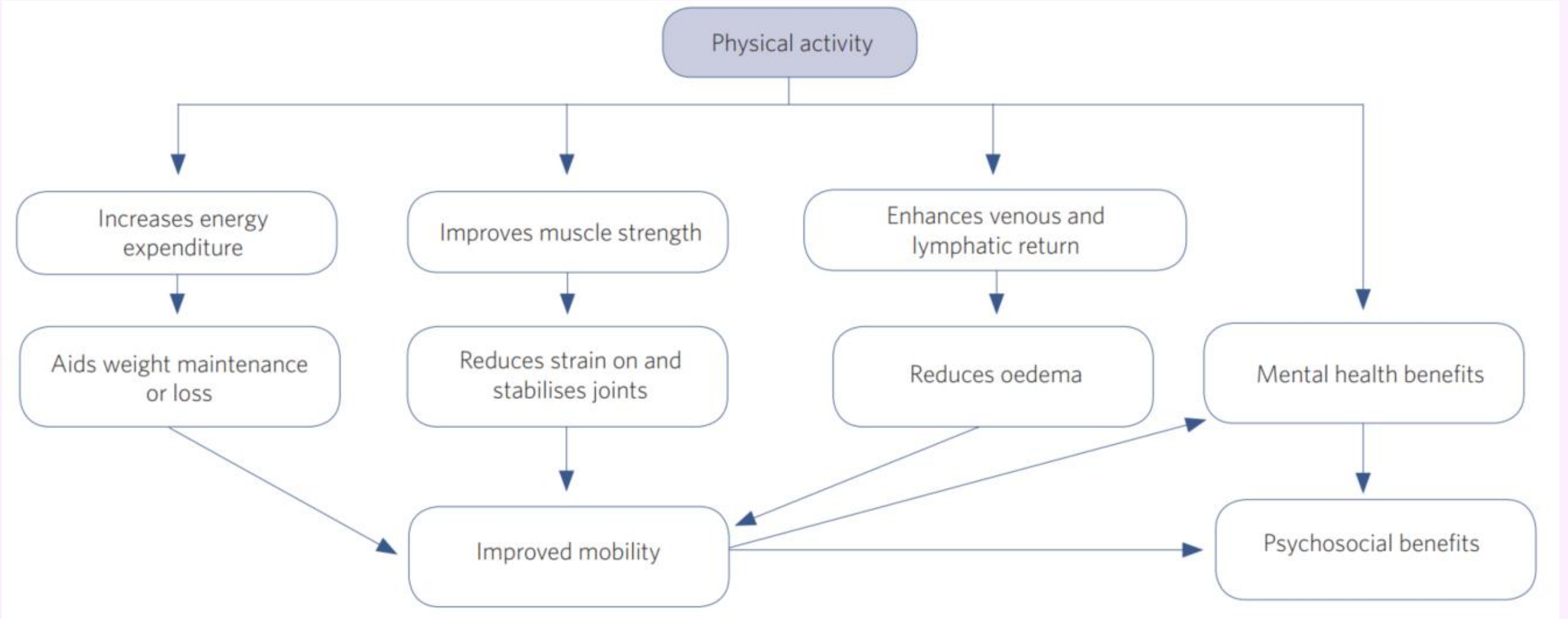
Lipedema Overview & Physical Exam by Dr Dean 23 obtained from https://www.youtube.com/watch?v=3FEfVCMK0gk

Management

- No cure.
- Education → self-management
  - Lipedema is **not** a factor of obesity, poor diet or poor fitness.
    It is genetically driven.
  - Lipedema is **commonly comorbid** with obesity, mood and eating disorders.
    - We don’t know who's the chicken and who is the egg.
  - Diet: This type of fat is typically not amenable to weight loss attempts.
    - There is moderate level evidence for ‘low inflammatory diets’ (Keto, Mediterranean)
    - Yo-yo dieting has been found to **increase** pain associated with lipedema.

Management

- Self-Management
  - Stress management
    - Online support groups, peer support.
    - Psychotherapy
  - Physical activity
    - Compress simultaneously
    - Aquatic-based
    - Consider low impact to reduce bruising risk
  - Planning/ Pacing
  - Compression
  - Desensitization - progressive increases in physical demand, compression.
  - Avoiding weight gain


Physical activity
Increases energy expenditure
Improves muscle strength
Enhances venous and lymphatic return
Aids weight maintenance or loss
Reduces strain on and stabilises joints
Reduces oedema
Mental health benefits
Improved mobility
Psychosocial benefits

WoundsUK

Management

- Workup
  - Mental Health assessment (regular), treat PRN
  - Consider workup for thyroid disease, DLD, PCOS, vitamin D level.
  - ABI and vascular studies – allows for highest tolerable compression prescription.

- Avoid Complications/ secondary risks
  - Avoid medications that induce peripheral edema or weight gain.
  - Consider skin management

- Referral to Allied Health Providers
  - Compression: stockings (consider co-prescribing donning/ doffing aids)
  - Physiotherapy & Massage therapy:
    - Soft tissue mobilization, desensitization, lymphatic flow, reduce fibrotic restrictions.
    - Address gait abnormalities, weakness, return to function.
  - Pneumatic compression devices
  - Manual Lymphatic Drainage

Management

- What else can I do to be useful?

Not Helpful	Maybe?	Yes!
Diuretics	Metformin Semaglutide Diosmin-Hesperidin Bariatric Surgery	**Liposuction*** **lipedemacanada.org**

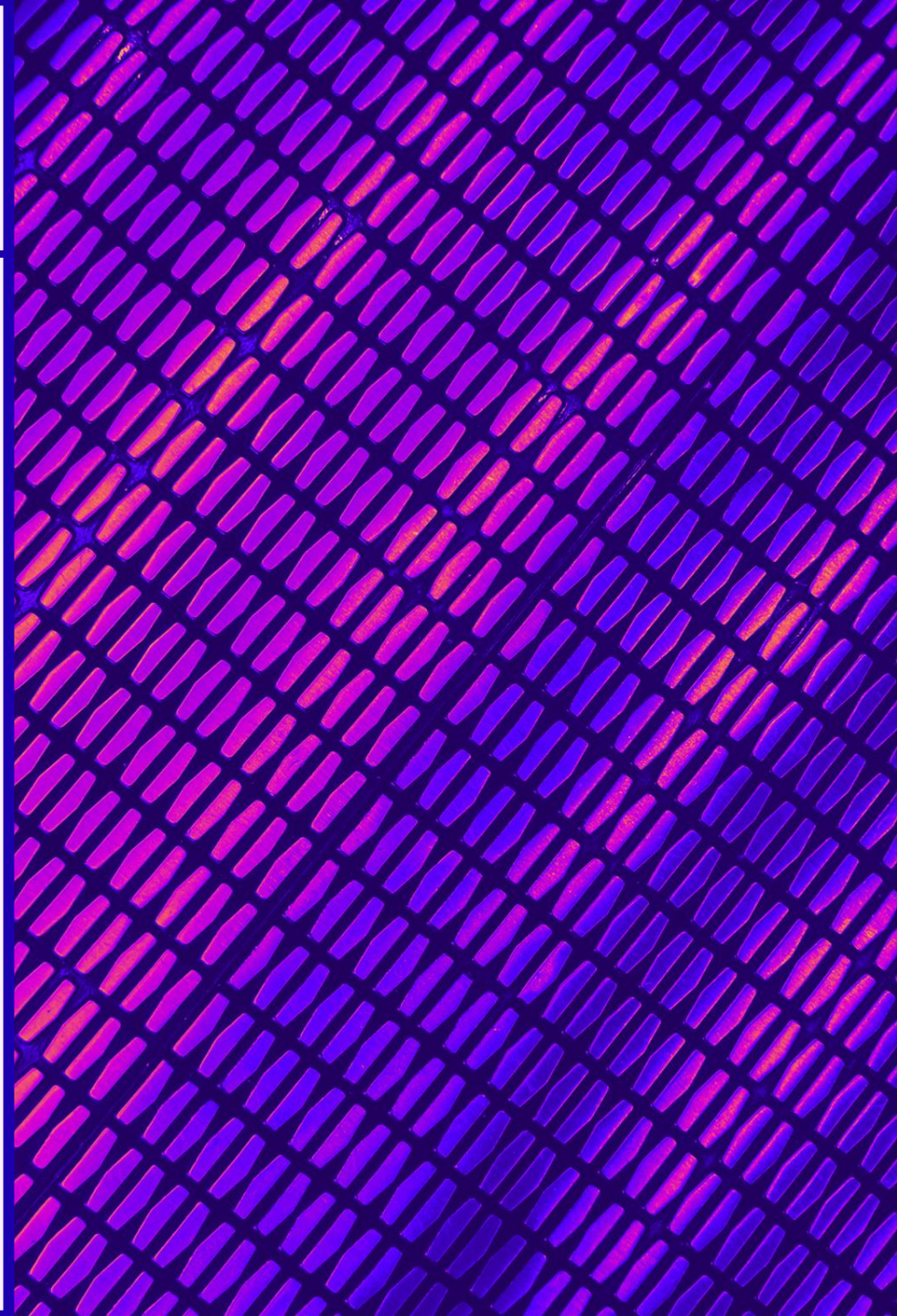
Management

Measuring Meaningful Gains

- Weight-Based
  - Waist-to-hip ratio
  - Limb circumferences (always at the same spot!)
  - Lower extremity volume (difficult)
  - These patients will have disproportionately high BMI.
- Functional
  - Visual Analogue Scale – pain, pain interference
  - Lower Extremity Functional Scale (LEFS)
  - SF-36 (quality of life questionnaire)

Take Home Messages

1. Lipedema is very common in women.
2. Diagnosis is clinical – helpful to rule out mimickers (PAD, PVD, hypothyroid)
3. Early identification and education can help mitigate secondary complications.
4. Management is specific and differs from strategies for neuropathy and fibromyalgia.



Resources

https://lipedemacanada.org/

- Clinician information, who to refer to!
- Patient information – self management, etc…
- Can order handouts for the office

https://bclymph.org/lipidema

YouTube: Fat Disorders Resource Society

- Self-management videos (i.e. how to perform Self Manual Lymphatic Drainage, Lymphatic Yoga)
- Education (clinician level)

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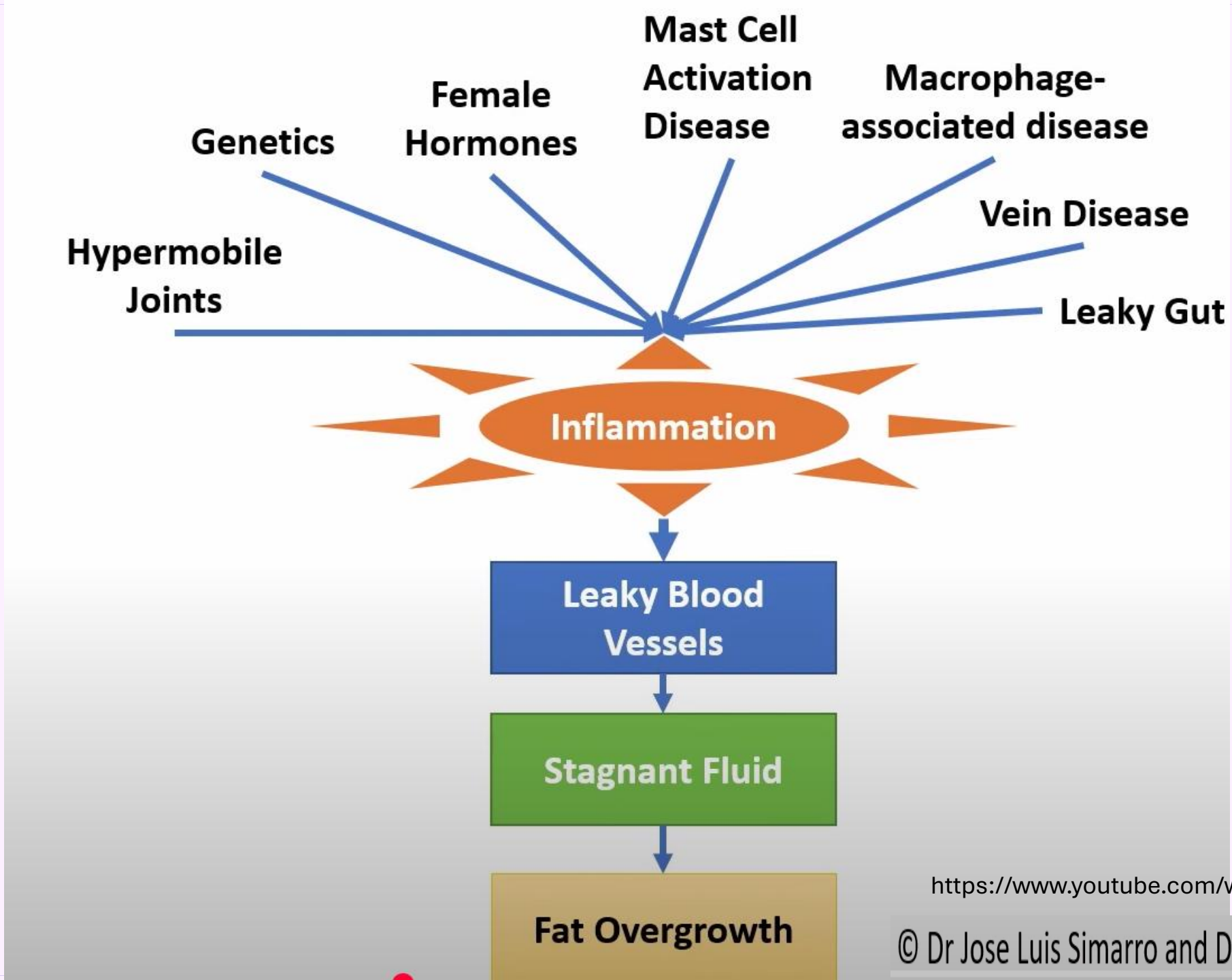

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