

**Patient Name: Berns , Mary**

**DOB: 1958-09-06**

**Age: 62**

Referring Physician: I have a provider that I go to for hormone testing and treatment. Her name is Carol Brinkman. She works out of a clinic called Simplicity Health in St. Cloud, MN.

My primary care doctor that I go to for illnesses and preventative care is Dr. Omann at Allina Clinic in Annandale, MN.

Phone number: Carol Brinkman: 320-227-5000

Dr. Omann: 320-274-3744

Fax number: Carol Brinkman fax :320-227-5025

Allina Clinic fax: 320-274-8194

Pharmacy Name: Thrifty White Pharmacy

246 Elm Street West, Annandale, MN 55302

Phone: 320-274-3062. Fax: 320-274-6546

Pharmacy Number: Phone: 320-274-3062

Fax: 320-274-6546

Pharmacy Address: 246 Elm Street West

Annandale, MN 55302

**CC:** Lipedema. Needs diagnosis.

**HPI:** Mary Berns is a 62 year young female with a history of Lipedema. She believes she has lipedema but is unsure and seeking diagnosis. A gentle massage does not hurt but if you push the lipedema tissue with a finger it is very painful. When a child will bump her it is painful. At night she will wake up with pain. Sometimes it feels like restless leg syndrome - she will get up and walk which helps or take Advil. Sometimes she feels tingling.

She was exposed to a lot of chemicals as a child (DDT). Dad was a crop duster - she cleaned chemicals off the wings with no protection.

She is very sensitive to chemical smells. She can handle some essential oils. She cannot handle perfume or cleaning supplies.

She will get nauseous and a headache. She wants to be more mobile and wants the pressure off her knees.

**Onset:** Worn shorts twice in her life. She has cellulite looking tissue on the back of her thighs in high school.

**Swelling?** Yes around the outside of her right ankle.

**Swelling worse during summer?** Yes

**Swelling worse when standing?** Maybe

**Swelling worse when sitting?** Maybe

**Limbs tight and heavy especially at end of day?** Yes

**Do you elevate your legs?** No

**Does swelling resolve with elevation or sleeping overnight?** Yes; she is much better in the morning especially of the ankles

**Areas with lipedema are unaffected by caloric restriction?** Lost 35 lbs a few years ago (700 calories/day x 3 years); she was still embarrassed to wear shorts or a swim suit. Leg lobules of fat did not reduce. She loses weight from the head on down. In the last 15 years she has developed a belly that she cannot lose weight from. Her legs may lose weight but the lipedema shape is still there. She was off her thyroid meds and now her arms are much larger.

**Reduced ability to get around (ambulation)?** Yes she is a lot less mobile. Her knees also have issues and she has arthritis.

**Any areas of your body that are colder than other parts?** No

**Any decrease in social activity?** No. She is embarrassed because people stare at her legs. This is why she will not wear shorts.

**Diet:** I have tried the Ketogenic diet, Paleo and whole food. I have had food sensitivity testing done. I have had my DNA done through

23. I am not generally hungry in the morning except when I am having bouts of acid reflux and potential ulcers. I have a gastrointestinal appointment coming up but it is being treated with 40 mg of Prilosec and it seems to be working. I eat after ten am. Last meal 7PM. I try to eat nothing with more than 200 calories at a time during the day as I am busy and not hungry as much so I eat when I am hungry. It usually adds up to about 7-800 calories by evening. I am very hungry at dinner so I will eat 800 calories at dinner. I stay under 1800 calories every day. On a rare occasion I might have 2200. NEVER over that.

**Exercise:** It hurts a lot to walk so I don't walk. I recently bought a recumbent stationary bicycle. My goal is to ride that each day. I don't exercise as it is painful but I usually don't sit during the day. I'm either chasing grandkids (6 age 6 and under) or out running errands or taking care of the house and yard. On days that I work (2 a day and 5 a day for 3 months in the winter I do sit at a desk). I was lifting weights before COVID but then the gyms closed. The next question asks if I sweat. I would like to expand on that. I have Hyperhidrosis. So I sweat excessively. My daughter inherited it worse than what I have and she had surgery at the Mayo Clinic where they severed her sympathetic nerve which did wonders, but the compensatory sweating is now in her feet. I used to leave puddles from my hands. After menopause it is not as bad. Yes sweating.

## **Pain**

Average Daily Pain Score (1-10):

Worst Daily Pain Score (1-10): 5

Lowest Daily Pain Score (1-10): 5

Pain is in the: My knees hurt with any activity, especially walking downhill. I have had torn meniscus repaired. I also have Osteoporosis and a lack of cartilage in my knees. My legs and hip keep wake me up several times at night. If I take Advil I can sleep better.

I'm not sure if I have restless leg syndrome but maybe. I've never asked about it.

Somedays my whole body hurts. I do have arthritis in my knees as well. Maybe all over? I don't know.

## **Conservative Therapy**

**Compression Garments:** I Just started lymphatic drainage massages recently again. I was doing them before COVID. Ordered compression garments on Amazon.

**Sequential Pneumatic Compression Pump:** None

**Manual Lymphatic Drainage Therapy:** Yes just started again since COVID; prior to COVID once every few months.

**Deep Tissue Therapy:** None

## **Weight**

Any history of weight gain: Yes, I gained 60-70 pounds with each of my three children. I was able to lose it after the first two and some with the third, but it has been increasing ever since. I was done with menopause at 42 and that has made it hard coupled with probable undiagnosed thyroid issues. I would be told my goiter was large but tests always came back normal until a doctor finally tested my antibodies. This went on until I was about 52. Once I got diagnosed with Hashimotos and treated in 2010 it stopped the weight gain but I had to work hard to lose some weight. I was up to 235 at that time. I got down to 200 in 2013. My weight crept back up to 213 by 2018. I then went on a strict diet of about 900 calories a day with just vegetable a little fruit and 2 lean proteins a day for 2 months and lost 10 pounds. I lost the remaining 18 over 6 months and got down to 185 before Covid hit and I did this by eating low fat, lean protein, salads with low calorie low fat dressings, fruits and vegetables and not cheating EVER (not even cake on my 60th or a danish when I was in Italy). Then COVID hit and I ran out of my thyroid meds and was off them for a year and didn't watch what I ate as much and I'm back up to 214.

Any history of weight loss: Yes, I lose most of my weight in my upper body. It's like it starts at my neck and works its way down, but my legs always remain larger. Even when I lost weight and was at my lowest in decades I had overhang below my knees at the top of my calves and above my knees that ten years ago at a heavier weight were not there.

## **Ever use of the following meds**

Phentermine: No

Dextroamphetamine: No

Adderall: No

Metformin: No

## **MEDICAL HISTORY**

First Menses: 15

Menopause: Done at 42

3 Pregnancy(ies)

3 Live Births

Hashimotos

Hyperhidrosis

Sinus infections/post nasal drip

Osteoporosis

Obesity

Arthritis

Acid reflux

Hypothyroid

Migraine Headaches

I was exposed to a lot of chemicals as a child. My dad was a crop duster and one of my jobs was to clean the chemicals off the

wings of the plane with no gloves, goggles or any protection. I am very sensitive to chemical smells but I don't know if this is related. Our well was also contaminated so we didn't drink the water but we did bathe in it and brush our teeth with it and cook with it.

## **SURGICAL HISTORY**

Torn meniscus-cartilage removed. Broken ankle -1995 Breast tissue removed under left arm

## **MEDICATIONS**

**Allergies:** Penicillin, recent hives from cephalexin and

**Medications:** Omeprazole, Levothroxine and Liothyronine

[Medications were reviewed]

## **SOCIAL HISTORY**

Smoking: No

Alcohol: 0

Any other drugs: No

## **FAMILY HISTORY**

Daughter had liposuction for her legs for probable lipedema

Daughter has venous insufficiency - her legs throbbled

Four sisters do not have lipedema

Mother likely had lipedema

Maternal grandmother also looks like she had lipedema

## **REVIEW OF SYSTEMS**

**General: Weight loss, weight gain, difficulty sleeping.** No complaints of: flu-like symptoms

**HEENT:** No complaints of: thick skull fat, difficulty swallowing, neck feels swollen, dry eyes, dry mouth

**CV:** No complaints of: palpitations, chest pain

**Dermatology: Easy bruising, burning sensations, stretch marks.** No complaints of: itching in skin/tissue, water trickling under skin, keloids

**Endocrine: Fatigue 3/10.** No complaints of: cold feet/hands, pre-diabetes, feeling thirsty all the time

**Gastrointestinal: Constipation.** No complaints of: bloating, diarrhea, stomach/intestinal pain, nausea, vomiting, early satiety

**Genitourinary: Pain with intercourse, incontinence, nocturia 5 times**

**Immunology/Infectious Disease/Allergy: Cellulitis, Allergies** (I don't know but I take Claritin every day. I have so much mucous in the morning I can fill two paper towels with the drainage down the back of my throat. I recently had Clarifix done at an ENT and that seems to be helping a ton. I can't answer your question about C-reactive protein and d-dimer blood but I chose no because I had to answer the question to submit the survey. I have not had those tested.)

**Musculoskeletal: Muscle aches, joint aches, low back pain.** No complaints of: muscle weakness, tight tendons, muscle cramps, flexible joints

**Neurology:** No complaints of: vibrations in tissue, vertigo, hearing loss, poor concentration, numbness

**Pulmonary: Frequent congestion.** No complaints of: sleep apnea, shortness of breath

**Psychiatry:** No complaints of: depression, anxiety, sexual/physical/emotional trauma

**Vascular: Water retention.** No complaints of: blood clot, swelling, dark skin on lower legs

**Other symptoms or concerns:**

## **PHYSICAL EXAM**

BP: 141/100 HR: 94 Weight: 214.5 Lbs 97.4 Kgs Height: 5'7" BMI: 33.59 TEMP: 97.5

Waist (cm): 86.5

Hips (cm): 121

Waist-to-hip-ratio: 0.71

A WHR of  $\geq 0.85$  cm is suggestive of obesity in women (World Health Organization, 2011). A value  $< 0.85$  is suggestive of increased fat on the lower part of the body.

General: Woman in no apparent distress

Gait: Legs rub together from groin to knees

HEENT: PERRLA; EOMI; does not wear glasses

Neck: No thyroid enlargement or nodules

Heart: Regular rate and rhythm; no murmurs, rubs or gallops

Lungs: Clear to auscultation

Abdomen: Non-distended, soft

Vascular: Stemmer negative on the hands and feet; No pitting edema; no evidence of acrocyanosis

## **LOOSE CONNECTIVE (FAT) TISSUE EXAM**

### **Head and Neck**

Cranial fat: Normal

Neck: Acanthosis nigricans: None

Lymph nodes: None

Supraclavicular fat: Normal

## **Back**

Dorsocervical fat pad: None

Folds of connective tissue on the sides of the back or under the bra: Yes

Lordosis: No

Shelf of tissue above the buttocks: No

## **Arms**

Axillary: Acanthosis nigricans: No

Axillary: Full and tender: No

Increased tissue upper arm: Yes

Palpable nodules upper arm: Yes

Increased tissue lower arm: Yes

Palpable nodules lower arm: Yes

Wrist cuff: Yes

Hand fat base thumb: No

Hand fat between MCPs: No

Stemmer hand: Negative

Heavy upper arms: Yes

## **Abdomen**

Palpable nodules: Yes above and below

Panniculus: Grade 1: the panniculus reaches the pubic hair but not the genitals

Heavy panniculus: Yes

Palpable nodules suprapubic: No

## **Legs**

Striae: Yes

Mattress pattern thigh tissue: Yes

Palpable nodules thigh tissue: Yes

Fat overhanging knee: Yes

Fat covers knee: No

Fat covers shin: Yes

Medial knee lobule: Yes

Stovepipe legs: No

Increased tissue lower leg: Yes

Palpable nodules calves: Yes

Ankle cuff: Yes

Fat around lateral malleoli: Yes

Fat around medial malleoli: Yes

Fat around Achilles: Yes

Fat on top of foot: No

Stemmer foot: Negative

Piezogenic papules: No

Flat feet: No

## **Vascular Exam**

Telangiectasia/Spider Veins: Yes

Visible Varicose Veins: Yes of the calves

Non-pitting edema: Yes

Corona phlebectatica: No

Pitting edema: No

## **Areas of Hypothermia**

Arms: Arms

Legs: No

Buttocks: No

Hips: Yes

## **Joints**

Valgus of knees: No

Varus of ankles: No

## **General**

Tissue tender in areas affected: Yes

Hands and Feet Not Affected: Yes

Bruising currently: Left lower leg; right lower leg posterior

Fibrotic Tissue: Only in the nodules

Heavy Tissue: Yes upper arms

### Beighton Score:

5th digits - 0/2

Thumbs - 0/2

Elbows - 2/2

Knees - 0/2

Hips - able to bend and touch the floor keeping the legs together and straight = 0

Score: = 2/9

Not flexible as a child

### Diagnostic Criteria for lipedema

Female: **Yes**

Bilateral and symmetrical manifestation with minimal involvement of the feet: **Yes**

Minimal pitting edema: **Yes**

Negative Kaposi–Stemmer sign: **Yes**

Pain, tenderness on pressure: **Yes**

Easy bruising: **Yes**

Persistent enlargement after elevation of the extremities or weight loss: **Yes**

Arms are affected 80% of the time: **Yes**

Hypothermia of the skin: **Yes**

Swelling worsens with orthostasis in summer: **Yes**

Lipedema tissue unaffected by caloric restriction, exercise, bariatric surgery: **Yes**

Vascular manifestation such as cherry angiomas, telangiectasia, venous disease: **Yes**

Does the patient meet criteria for lipedema? **Yes**

### Labs:

NA

The lower extremity functional scale (**LEFS**) is a measure of disability for the legs. Lower scores indicate more dysfunction.

Score = 49/80

### Five Questions for Hypermobility: 0/5

A positive answer for two or more questions has a sensitivity of 91%, a specificity of 75% for predicting hypermobile joints (BMC Musculoskelet Disord. 2020; 21: 174).

## ASSESSMENT

### 1. Lipedema Staeg 2 Type III and IV

#### Lipedema of the abdomen

Lipedema: Lipedema is a congenital enlargement (hyperplasia of the adipose tissue) of the loose connective (fat) tissue on the legs almost exclusively seen in women by the third decade. According to an epidemiologic study by Földi E and Földi M, lipedema affects 11% of the female population. Lipedema was initially described by Allen and Hines in 1940; its etiology remains unknown and it remains under-diagnosed. Classically women with lipedema have disproportionate bodies with larger legs and hips than arms and waist. In 1951 Wold et al. analyzed 119 cases and provided the diagnostic criteria for lipedema:

- 1) Almost exclusive occurrence in women
- 2) Bilateral and symmetrical manifestation with minimal involvement of the feet
- 3) Minimal pitting edema; the Kaposi-Stemmer sign is negative
- 4) Pain, tenderness on pressure
- 5) Increased vascular fragility; easy bruising
- 6) Persistent enlargement after elevation of the extremities or weight loss
- 7) Arms are affected 80% of the time
- 8) Hypothermia of the skin
- 9) Swelling worsens with orthostasis in summer
- 10) Unaffected by caloric restriction

The stage of disease refers to how the skin and tissue appear visually:

When the skin is still smooth, the lipedema is stage 1.

When the skin and tissue have indentations in a mattress pattern, the lipedema is stage 2. Lipedema stage 3 has larger out-pockets of tissue.

The types of lipedema refer to the location of the fat:

Type I: In the area of the buttocks and hips (saddle bag phenomenon)

Type II: Buttocks to knees, with formation of folds of fat around the inner side of the knee

Type III: Buttocks to ankles

Type IV: Arms

Type V: Legs

In lipedema, there are increased macrophages in tissue, a microangiopathy (leading to increased bruising), dilation of subdermal capillaries which can be seen as telangiectasias and petechiae on the skin, dilation and leakage of lymphatic vessels in the subcutaneous fat - leaking lymphatics into subcutaneous fat increases growth of adipose tissue in mouse models.

Diuretics such as Lasix concentrate proteins in the interstitium increasing the work load of the lymphatic system. Do not use diuretics.

Corticosteroids should be avoided as they weaken blood vessels (and lymphatics) and cause a rebound increase in adipose growth once stopped.

For any surgery, there must be professional manual lymphatic drainage at minimum one week before and for four weeks after the surgery - longer if there is a slow recovery. In lipedema and lymphedema (lymphatic dysfunction), there is difficulty in handling all the fluid and inflammation after surgery. This means there is a need for hands on MLD from a trained practitioner. Mismanagement of MLD after surgery would risk the development of difficult to control lymphedema. Adequate MLD after surgery is standard of care (<https://pubmed.ncbi.nlm.nih.gov/34049453/>).

## 2. Lymphedema Stage 0-1 (lipolymphedema).

3. Varicose veins. ?Venous insufficiency.

### PLAN

1. **Manual therapy:** Find a certified lymphedema therapist (CLT) who can provide manual lymphatic drainage therapy to reduce fluid, deeper manual or instrument assisted soft tissue therapy to reduce fibrosis, educate on skin care and compression and discuss the use of a sequential pneumatic compression pump.

<https://klosetraining.com/therapist-directory/>

<https://lymphnet.org/find-treatment>

<https://www.clt-lana.org/>

**Tracy DeWolfe, PT, STAR/C, CLT**  
763-684-3888  
17.6 miles

**Allina Health - Courage Kenny Rehab**  
*Buffalo Hospital*

300 Catlin Street  
Buffalo, MN 55313

**Tamra Blahut, MPT, CLT-LANA**  
763-684-3880  
17.7 miles

**Sister Kenny Sports & Physical Therapy**  
*Physical Therapy*

101 14th Street, Suite A  
Buffalo, MN 55313

**Jennifer Majeski, OTR/L, CLT**  
320-373-2244  
18.0 miles

**CentraCare Health Home Health & Hospice**  
*Home Health*

2035 15th Street North  
St. Cloud, MN 56303

**Amy Bergeron, PT, CLT-LANA**  
320-534-3000

**St. Benedict Senior Community - Sartell**  
**Rehab Suites**  
*Physical Therapy*

990 19th St S  
Sartell, MN 56377

19.2 miles

**Jessica Munsch, OTR/L, CLT**  
320-373-2005

**Meeker Memorial Hospital**  
*Occupational Therapy*

612 South Sibley Avenue  
Litchfield, MN 55325

2. Elevate your legs to help reduce swelling.

3. Venous duplex ultrasound of the legs to assess for venous insufficiency. Order provided.

4. Agree with lipedema reduction surgery.

5. Please have your therapist measure you for a compression garment: Bioflect or CZ Salus leggings. Open toes.

Please have your therapist help you get a pump if you respond well to manual lymphatic drainage therapy.

**Lymph Pumps (E0652):** I recommend two pumps for treatment of rare adipose disorders: Lymphapress Optimal (877-316-8458) or Flexitouch (866-435-3948). The benefit of the Lympha Press is you can treat both legs at one time. These are the only two pumps I allow my patients to use. It is not standard practice to prescribe sequential compression pumps (SCDs) usually reserved for prevention of deep venous thromboses or for treatment of cardiovascular edema (E0650; E0651). In the latter two situations, the lymphatic vessels are intact and pump normally. As a consequence of using SCDs in RADs, SCD pumps push the fluid up the leg into the abdominal area where it accumulates due to lymphatic dysfunction. As this fluid sits in the tissue with all its nutrients and protein, fat grows. From published data, we know that lymph makes fat grow (Nat Genet. 2005 Oct;37(10):1023-4). With the Lymphapress or Flexitouch, the abdomen is treated along with the leg and the chest is treated along with the arm preventing dangerous pooling of lymph fluid. A E0652 device with a segmented, multi-ported pump allows for individual pressure calibration at each port. This allows the patient to alter pressure in areas of severe pain as found in Dercum's disease or lipedema while obtaining a compression sleeve that treats the abdomen and/or chest.

### ICD-10 codes for this visit

R60.9 Lipedema

I89.0 Lymphedema

I86.8 Varicose veins

I87.2 Chronic venous insufficiency??

M79. 605 Pain in the left leg

M79. 604 Pain in the right leg

M79.601 Pain in the right arm

M79.602 Pain in the left arm

R10.9 Unspecified abdominal pain

This visit was 60 minutes with >50% time spent counseling on lipedema and other causes of fat tissue growth and possible treatments that may help Mary.

**Electronically signed by Karen L. Herbst, MD, PhD** 2021-08-02 11:08 AM

Karen L. Herbst, MD, PC

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