📘 ELASTIQUE PRACTITIONER TRAINING MANUAL

Compression • Lymphatics • Textile Engineering • Clinical Integration

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CHAPTER 1 — FOUNDATIONS OF LYMPHATIC & COMPRESSION PHYSIOLOGY

The lymphatic system is a **mechanically dependent fluid clearance network** essential for immune function, tissue recovery, detoxification, and swelling control.

1.1 Lymphatic System Fundamentals

Unlike the cardiovascular system, the lymphatic system has **no central pump**.
Lymph movement relies on:

- **Skeletal muscle contraction** (primary driver)
- **Arterial pulsation** (secondary driver)
- **Diaphragmatic excursion** (major modulator of thoracic duct flow)
- **External compression** (MLD, garments, motion, respiration)
- **Tissue deformation** (walking, stretching, joint rotation)

Superficial lymphatic vessels lie 1–2 mm below the skin; therefore, **gentle mechanical stimulation** is more effective than deep pressure.

1.2 Watersheds and Drainage Territories

Watersheds divide the body into distinct drainage zones.
Understanding them is essential for interpreting Elastique's bead placement and flow pathways.

Relevant watersheds:

- **Axillo-inguinal watershed** (upper ↔ lower body)
- **Inter-inguinal** (left ↔ right leg)
- **Popliteal watershed** (lower ↔ upper leg)
- **Abdominal midline watershed**
- **Supraclavicular watershed** (trunk ↔ head)

Elastique's **MicroPerle® mapping follows these boundaries**, supporting directional fluid movement.

1.3 Common Causes of Lymphatic Dysfunction

- Sedentary behavior
- Air travel
- Inflammation
- Overtraining
- Hormonal shifts
- Scar tissue/fibrosis
- Poor hydration
- Stress + shallow breathing
- Heat exposure
- Surgery or trauma

These lead to **interstitial fluid accumulation**, heaviness, puffiness, and impaired tissue recovery.

1.4 Compression and Lymphatic Mechanics

Compression supports lymphatic physiology by:

- increasing interstitial pressure → improved lymph uptake
- reducing diffusion distance for fluid entry
- mechanically stimulating superficial collectors
- reducing venous pooling → less capillary leakage
- enhancing muscle pump efficiency
- mitigating gravitational swelling

Optimal lymphatic compression range: 8–15 mmHg

Higher pressures (20–40 mmHg) can **collapse initial lymphatics**, reducing uptake.

Elastique operates in the **ideal lymphatic zone**.

CHAPTER 2 — COMPRESSION CATEGORIES & POSITIONING OF ELASTIQUE

2.1 Medical Compression

- Pressures: 20–60+ mmHg
- Flat-knit or rigid fabrics
- Used for venous insufficiency, lymphedema
- Requires clinical fitting
- Thick, stiff, low stretch, high containment

2.2 Athletic Compression

- Designed for muscle oscillation control
- Variable panel-based tension
- Low consistency in mmHg gradient
- Not lymphatic-specific

2.3 Consumer “Compression”

- Fashion garments labeled as compression
- Provide no measurable pressure
- Zero anatomical engineering

2.4 Elastique = A New Category

Lymphatic-Optimized Wellness Compression

Defined by:

- calibrated 8–13 mmHg
- anatomical lymphatic pathway mapping
- MicroPerle® micro-massage
- double-knit textile precision
- directional pressure and motion-amplified stimulation

This is the **first engineered lymphatic garment**.

CHAPTER 3 — FABRIC ENGINEERING (PROFESSOR-LEVEL REWRITE)

This is the technical backbone of Elastique's superiority.

3.1 Base Materials

Elastique uses:

Ultra-fine polyamide filament (44–78 dtex)

- low loop height
- high smoothness
- excellent tensile strength
- reduced bulk

High-modulus elastane (15–25% blend)

- elongation: 400–800%
- high recovery modulus
- precise circumferential tension generation

Oeko-Tex Class I certified

- safe for long wear
- hypoallergenic
- compliant with EU consumer safety standards

3.2 Double-Knit, High-Gauge Architecture

Traditional double-knits = thick.
Elastique double-knits = thin.

Why?

- **High gauge (E28–E36 machine range):**
  Thousands of needles → tiny stitches → smooth, thin fabric

- **Shallow loop height:**
  Reduces thickness while maintaining tension

- **Dual-layer interlocking loops:**
  Multi-directional stability + low curling

- **Precision elastane inlay:**
  Ensures consistent tension across every wale and course

Approximate measurable properties:

- **GSM:** 180–260 g/m² (light for double-knit)

- **Wale density:** 40–60 wales per inch

- **Course density:** 50–70 courses per inch

- **Modulus:** Medium-low stiffness, ideal for lymphatic function

- **Hysteresis:** Low → maintains consistent pressure over hours

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3.3 Compression Physics: Laplace's Law

Pressure = Tension ÷ Radius

Elastique adjusts:

- stitch density

- elastane draft ratio
- circumference grading

to create true gradient compression:

- **higher at ankle**
- **lower at thigh**

This gradient matches the physiological direction of lymphatic/venous return.

3.4 Dynamic Compression + Shear Mechanics

Textile contact + MicroPerle motion = **biomechanical synergy**:

- Compression applies steady superficial pressure
- MicroPerle add external shear forces
- Movement generates cyclic loading
- This increases interstitial shear stress
- Shear stress opens lymphatic endothelial junctions
  → **greater lymph uptake**

This is consistent with manual lymphatic drainage (MLD) principles.

3.5 Environmental Performance

Elastique maintains compression in:

- heat (thermoregulation via thin double-knit)
- humidity (polyamide wicks efficiently)
- activity (low hysteresis)

Practitioner note:
Do not wear wet garments for extended periods; moisture reduces fabric modulus.

CHAPTER 4 — PATENTED TECHNOLOGY (US 11,849,777)

Your patented features:

4.1 Watershed Fingers

- placed at watershed borders
- apply micro-shearing
- facilitate cross-territorial flow

4.2 Massage Fingers

- directional projection toward lymph node basins
- help guide interstitial fluid

4.3 MicroPerle® Arrays

Placed according to:

- superficial lymph vessel pathways
- node basins (inguinal, popliteal, axillary)
- areas of common congestion (abdomen, thighs, arms)

Function:

- mechanostimulation
- enhanced microcirculation
- dermal shear forces mimicking MLD

- improved tissue pliability

4.4 Dynamic vs Static Compression

Compression alone = static benefit
Compression + MicroPerle = **dynamic benefit**
Movement increases stimulation amplitude.

CHAPTER 5 — CLINICAL EVIDENCE

5.1 2018 Elastique Clinical Study (COS01-EA1-MM18)

Study Summary

- Total participants = 7 (5 completed)
- 8-week protocol
- Leggings worn: 3× per week during training
- Controlled photography
- Cellulite & texture grading

Findings

- visible cellulite attenuation (subjects 004, 007, 009)
- silhouette contour improvement (002, 006)
- 100% showed smoothing
- 80% reported less water retention
- 50% perceived improved microcirculation
- all satisfied at T56
- zero adverse events

Mechanism-match:
Improvements correlate with known effects of mechanostimulation + mild compression.

5.2 Comparative Compression Literature Review

Research supports:

- mild compression enhances lymph formation
- mechanical stimulation reduces cellulite appearance
- compliance is highest with low-pressure garments
- dynamic stimulation improves circulation
- graded compression reduces swelling more effectively

Elastique aligns with all findings.

CHAPTER 6 — PRACTITIONER PRODUCT KNOWLEDGE

6.1 Leggings

- full pathway (ankle → inguinal)
- ideal for swelling, fibrosis-prone tissues, heaviness

6.2 Stirrups

- targets ankle–calf pump
- great post-flight or post-running

6.3 Shorts

- targets inguinal nodes + abdominal stagnation
- useful for bloating, sluggish digestion

6.4 Bodysuits

- full trunk stimulation
- supports diaphragmatic lymph flow

6.5 Sleeves / Tops

- upper-body stagnation
- breast swelling
- post-arm massage continuity

6.6 Jumpsuits

- whole-body mapping
- best for systemic congestion or deep recovery

CHAPTER 7 — PRACTITIONER PROTOCOLS

7.1 Wear Guidelines

- 1–8 hours/day
- during movement
- avoid sleeping in compression

7.2 Clinical Integration

- wear **after MLD** to maintain flow
- use between sessions to prevent re-stagnation
- excellent for detox programs

7.3 Contraindications

- severe uncontrolled CHF
- severe PAD
- acute infection
- active DVT
- unexplained swelling

CHAPTER 8 — DIFFERENTIATION SUMMARY

Elastique is unique because it combines:

- **advanced textile engineering** (thin double-knit, fine denier, high gauge)
- **lymphatic-optimized pressure** (8–13 mmHg)
- **dynamic mechanostimulation** (MicroPerle®)
- **anatomical mapping** (watersheds, node pathways)
- **movement-enhanced effect**
- **clinical evidence** (COS01-EA1-MM18)
- **superior comfort & compliance**

This creates the **first scientifically engineered lymphatic stimulation garment**.

To add: Experts, customer testimonials, press and book mentions