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admin@connectedhealth.au
+61 (0)408 952 044
www.connectedhealth.au

Fascia & the ECM: The Body's Hidden Network

How Connective Tissue Holds Everything Together (and What Happens When It Doesn't)

If you live with **hypermobile Ehlers-Danlos Syndrome (hEDS)**, you may have heard people mention your "connective tissue" or "fascia." But what do these terms really mean? And how could they be the **missing link** behind your widespread symptoms?

This page introduces the **fascia** and the **extracellular matrix (ECM)** — the soft tissue scaffolding that connects and communicates across your entire body.

What Is Fascia?

Fascia is a web of **stretchy, fibrous tissue** that wraps around every muscle, nerve, organ, and blood vessel in your body. It helps:

- Support and stabilise joints
- Coordinate movement
- Transmit signals between systems
- Protect tissues from strain or impact

Fascia is **not just structural** — it's also **sensory, hydraulic, and communicative**. It helps regulate **fluid flow, immune response, and nerve input**.

What Is the ECM?

The **extracellular matrix (ECM)** is the microscopic fluid- and fibre-rich environment that surrounds every cell. It includes:

- Collagen and elastin (for stretch and strength)
- Ground substance (a gel-like material that holds fluid)
- Signalling proteins and immune molecules

Think of the ECM as a **sponge-like communication highway** that connects cells, tissues, and systems.

Why Does This Matter in hEDS?

In hEDS, connective tissue is **more elastic but less stable**, which means:

- Fascia doesn't hold tension correctly
- Valves and vessels lose support
- Nerves and vessels get overstretched or compressed
- Communication between body systems gets scrambled

When the ECM becomes **too stiff, too loose, or overwhelmed with inflammation**, symptoms can spiral.

Introducing the Button-Zipper Model

Your fascia and lymphatic vessels rely on **tiny valves** to control flow. These valves act like:

- **Buttons**: loosely connected flaps that open with pressure
- **Zippers**: tightly joined seams that stay closed until force is applied

In hEDS, pressure imbalances and inflammation may cause these valves to fail. That can lead to:

- Local fluid pooling
- Pain and swelling
- Immune system activation

Fascial release, hydration, and gentle pressure work may help restore flow in these systems.

What Can It Feel Like?

Fascial dysfunction can cause:

- Stiffness or "stuck" sensations
- Pulling or pain across muscles or joints
- Pressure headaches, TMJ, or eye pain
- Tightness in the chest, throat, or abdomen
- Brain fog, fatigue, or poor circulation

Some people experience "body glue" sensations or flare-ups triggered by pressure, posture, or fluid shifts.

What Helps?

- **Hydration** with electrolytes
- **Myofascial release**, gentle movement, and bodywork
- **Magnesium soaks or castor oil packs**
- **Rolling fascia or gentle massage** (anticlockwise rolling may help)
- **Tracking symptoms with the ConnectED App** to identify pressure triggers

Emerging Science

- Fascia is now recognised as a **sensory and fluid-regulating organ**
- The ECM responds to mechanical stress, inflammation, and hormones
- Fascia may coordinate with the nervous and immune systems via mast cells

In hEDS, **loss of fascia-ECM coherence** may be what drives the spiral collapse of multiple body systems.

This page is for educational purposes and is not a substitute for medical care. Always consult your healthcare provider for personal advice.

About the Author

Tracy Finnegan, RN, B.AppSci (Integrated Resource Management), MAICD, LEAN Patient Expert

Tracy is an intensive care nurse and systems thinker with lived experience of hypermobile Ehlers-Danlos syndrome (hEDS), dysautonomia, and mast cell activation. She is the founder of **ConnectED Health**, an initiative combining clinical research, patient insight, and AI technology to improve diagnosis and care for complex, multisystemic conditions. Tracy works collaboratively with researchers and clinicians to bridge the gap between emerging science and real-world patient care.