The Interstitium: The Body's Possible Third Circulatory System

New research suggests that exercise and body work—our bread and butter—may support one of the body's most important fluid networks.

As exercise professionals, massage therapists, and body workers, we spend much of our time helping people move better. Whether it's walking, strength training, mobility exercises, stretching, massage, or body work, movement and manual therapy are the foundation of what we do.

For years, we've observed that clients often feel less stiff, move more freely, and function better after a combination of exercise and hands-on care. Now, emerging research on a recently recognized body-wide network known as the **interstitium** may help explain why.

In 2018, researchers described the interstitium as a vast network of fluid-filled spaces found beneath the skin, around muscles, surrounding organs, and throughout connective tissues. Some scientists have even referred to it as the body's possible **"third circulatory system,"** working alongside the cardiovascular and lymphatic systems. While the terminology is still debated, there is growing agreement that this network plays a critical role in fluid movement, shock absorption, tissue health, immune function, and communication throughout the body.

What makes this discovery especially exciting for those of us in the exercise and body work professions is that the primary tools we use every day may directly influence this system.

Every muscle contraction, every deep breath, every step we take, and every hands-on treatment creates pressure changes throughout the body's tissues. These pressure changes help move fluid through the interstitium, much like muscle contractions help move blood through veins and lymph through the lymphatic system.

In many ways, movement acts as a pump.

This may help explain why prolonged sitting often leaves people feeling stiff, sluggish, and uncomfortable. When we stop moving, we reduce the natural mechanical forces that help keep fluids moving throughout the body. Conversely, walking, exercise, stretching, and body work may help restore healthy fluid movement and tissue function.

Researchers are also investigating the role the interstitium may play in inflammation, healing, aging, and even cancer. Because this network appears to provide pathways for fluid movement throughout the body, scientists are exploring how it may influence the spread of cancer cells and whether a better understanding of the interstitium could someday improve cancer detection, treatment delivery, and targeted therapies. While much of this work is still developing, it highlights the growing importance of this remarkable system.

For the average person, however, the practical takeaway is simple.

Movement matters.

In fact, this research reinforces one of the most important principles in health and fitness:

Motion is lotion.

Walking, strength training, mobility work, and regular physical activity may not only benefit muscles, bones, joints, and the cardiovascular system—they may also help maintain the health and function of this extensive fluid-filled network that connects much of the body from head to toe.

Body work and massage can be valuable partners in that process. By helping reduce muscle tension, improve tissue glide, enhance relaxation, and restore comfortable movement, they may complement the body's natural fluid movement systems. However, the greatest benefits are often seen when body work is paired with regular movement and exercise.

The science of the interstitium is still evolving, but one message is becoming increasingly clear: the human body was designed to move. The more we learn about this remarkable network, the more we appreciate that movement and manual therapy are not simply working on muscles and joints—they may be supporting one of the body's most important systems.

For those of us in exercise and body work, that's exciting news because movement and hands-on care aren't just part of what we do—they are the very heart of what we do.

Crazy but True

Scientists once believed much of the connective tissue surrounding muscles and organs was relatively solid. We now know that many of these areas contain fluid-filled spaces that expand, compress, and respond to movement. Every walk, workout, stretch, and body work session may help influence this system, providing yet another reason to stay active and keep moving throughout life.