

# I AM ME

HEALTH & WELLNESS CENTRE

Finding Meaning, Creating Purpose



## BODY COMPOSITION

Body composition describes what the body is made of and how its various parts work together to support health. Instead of only focusing on body weight, it examines the proportions of fat, muscle, bone, water, and other tissues that keep the body functioning daily. Weight alone cannot provide the full picture. Two individuals may weigh the same, yet their bodies can function very differently depending on muscle mass, fat distribution, and bone strength. This is why body composition is an important aspect of understanding overall well-being.



Lean body mass includes muscles, organs, connective tissue and body water. These are the tissues that stay active throughout the day and night, even during rest. They support breathing, circulation, digestion, movement and cellular repair without requiring conscious effort. Muscle is especially important because it plays a large role in how the body uses energy. Bodies with more muscle tend to manage blood sugar more effectively and use energy in a steadier way. Muscle tissue also requires more energy to maintain itself, which means it continues to support metabolic activity even when the body is not physically active.



Body fat is often misunderstood, yet it performs several essential functions. Fat protects the organs, supports hormone production, helps the body absorb certain vitamins and provides a reserve source of energy. Without a healthy level of fat, the body would struggle to maintain normal physiological processes. There is a type of fat known as essential fat that is found in areas such as the bone marrow, organs and nervous system. This fat is necessary for survival. Storage fat, which sits under the skin and around internal organs, serves as insulation and helps the body maintain temperature.

The location of fat within the body matters. Subcutaneous fat lies just beneath the skin and is generally considered less disruptive to normal metabolic function. Visceral fat surrounds the organs in the abdominal area and is more biologically active. It can release substances that influence inflammation, heart health and the way the body regulates energy. Understanding where fat is stored provides a clearer picture of internal health rather than relying only on outward appearance

Muscle naturally changes across the different stages of life. During childhood and adolescence, the body grows quickly as hormones support the development of new tissue. Early adulthood is often associated with peak strength and muscle density. Over time, gradual changes may occur, and muscle mass can decline as hormonal patterns shift. This is a normal part of the ageing process and reflects the body's ongoing adaptation to its internal and external environment.

Bones form another important part of body composition. Although they may seem fixed and unchanging, bones are living tissue that is constantly being renewed. They provide structure, protect vital organs and allow the body to move with stability. Bones also store minerals such as calcium and phosphorus, releasing them when needed to maintain balance within the body. Muscle and bone are closely connected, as the pull of muscles helps keep bones strong.



Water makes up a large percentage of the human body and supports nearly every function required for survival. It carries nutrients to cells, helps regulate temperature, supports digestion and allows chemical reactions to take place. Because hydration levels can shift from day to day, they can temporarily influence body weight and composition readings. This is one reason why measurements are often taken under consistent conditions



There are several ways to measure body composition. Body mass index is widely known because it compares weight to height, offering a general overview. However, it cannot distinguish between fat and muscle, which limits how much it can reveal about internal health. More advanced tools provide greater detail. Dual-energy X-ray absorptiometry, commonly called DXA, measures bone density while also assessing fat and muscle distribution. Bioelectrical impedance analysis estimates body composition by sending a mild electrical current through the body to evaluate water levels in different tissues. Other techniques, including skinfold measurements and specialised weighing methods, contribute additional insight into how the body is structured

Hormones influence body composition in many ways. Insulin helps move glucose from the bloodstream into the cells so it can be used for energy. Cortisol, which is released during times of stress, affects how the body stores fat and uses protein. Oestrogen and testosterone support the development and maintenance of muscle and bone, while thyroid hormones help regulate how quickly the body uses energy. Natural changes in these hormones across the lifespan contribute to shifts in fat distribution, muscle maintenance and metabolic activity.

Metabolism refers to the processes that allow the body to convert food into energy. A large portion of daily energy use occurs at rest, supporting essential functions such as breathing and circulation. Muscle requires more energy than fat to maintain itself, which is why the proportion of lean tissue can influence how much energy the body uses throughout the day. Looking at body composition, therefore, provides a more meaningful understanding of metabolic health than weight alone.



Nutrition plays a continuous role in supporting the tissues that make up the body. Protein provides the building blocks needed for muscle structure, immune function and cellular repair. Carbohydrates supply energy for the brain and muscles, while dietary fats support hormone production and help maintain healthy cells. Vitamins and minerals assist with countless processes that allow the body to operate smoothly. Together, these nutrients contribute to the maintenance and renewal of body tissues.



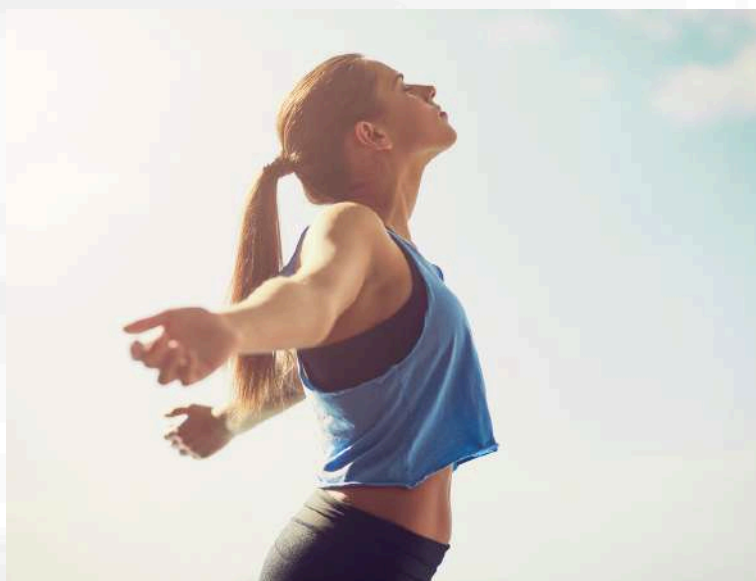
**Movement also shapes body composition because the body responds to physical demand. When muscles are used regularly, the body supports their structure through ongoing repair processes. Weight-bearing activity encourages bone strength, while sustained movement supports heart and lung function. These responses highlight the body's ability to adjust and remain resilient.**



**As the body ages, gradual shifts in composition are expected. Hormonal changes can influence where fat is stored and how muscle is maintained. Fat mass can increase even when body weight appears stable, which illustrates why internal changes are not always visible. Bone density may also change over time, reinforcing the importance of understanding the body from a long-term perspective.**

**Natural biological differences contribute to variation in body composition. Females typically carry a higher proportion of essential fat to support reproductive and hormonal function. Males often have greater absolute muscle mass due to higher levels of testosterone. These patterns reflect normal human physiology and demonstrate that healthy bodies exist in many forms.**

**Sleep supports the balance of body composition by allowing the body to recover and regulate important hormones. During restful sleep, growth hormone is released, tissue repair takes place, and appetite-related hormones are stabilised. When sleep is disrupted, these processes may shift, affecting metabolic balance and internal regulation.**





**Inflammation provides further insight into internal health. Higher levels of visceral fat are often linked with ongoing low-grade inflammation, which can influence how the body responds to insulin. Balanced metabolic function is commonly associated with lower inflammatory activity, illustrating how body composition reflects processes that extend beyond what can be seen externally.**

**Over time, cultural messages have shaped how bodies are viewed, often emphasizing appearance. Scientific understanding continues to expand this perspective by highlighting the importance of function, strength and metabolic stability. Body composition supports this broader understanding by focusing on how the body operates rather than how it looks.**

**Advances in technology now allow researchers and health professionals to study the body in greater detail. Imaging tools can examine bone structure, identify fat deposits around organs and observe how tissues interact. These developments continue to deepen knowledge of the human body as a connected and highly responsive system.**

**Body composition is increasingly recognised as a meaningful indicator of overall health within public health research. Examining the balance between lean tissue and fat distribution provides clearer insight into long-term physiological patterns and helps explain how the body adapts over time.**

**Understanding body composition provides a more comprehensive view of overall health. No single number can define the condition of a human body. Instead, health is reflected in the way tissues function together to support movement, energy, stability and recovery.**



# IN CONCLUSION:

Body composition ultimately offers a window into the body's internal environment. It reflects the combined influence of genetics, hormones, nutrition, sleep, movement and lived experience. Each tissue plays a crucial role in maintaining the balance that enables the body to function properly every day. This understanding highlights the body as a dynamic system that continually adjusts to meet changing needs. Looking beyond body weight reveals the intricate structure that supports strength, metabolic activity and resilience, providing a clearer picture of how the body sustains itself throughout life.



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- **Craft a Personalized Wellness Plan** - Set actionable goals to regain control over your health.
- **Blood Sugar Balancing Techniques** - Learn simple strategies to keep your energy and cravings in check.
- **Mindset Mastery** - Tackle limiting <sup>#ddcebd</sup>beliefs that are holding you back from achieving lasting change.

After our session, you'll receive a complimentary copy of '**Stop Eating Your Stress**'—your ultimate guide to conquering stress-related eating habits and sustaining long-term wellness.

Ready to take the first step toward lasting change?

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Message me at **082 928 6742** or email [jeanettemuldner@gmail.com](mailto:jeanettemuldner@gmail.com).

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