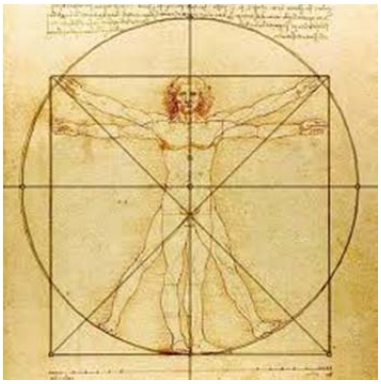
Proportionality of Body Stature

The importance of knowing how tall we are is somewhat obvious. What is less obvious is the importance of knowing the proportionality of our vertical height. The ideal proportionality of a human body's stature was defined by Leonardo da Vinci. The drawing of the "Vitruvian Man" or "drawing of proportions of man" is the ideal human proportions are based on geometry.



Da Vinci identified the ideal proportionality. Not all humans have ideal proportions. Some of us can be disproportioned. Understanding of the proportionality of the human body has importance to many arenas. Portrait painters must know the rules of proportionality. The clothing fashion industry has methods of using clothing to alter the perception of body proportions. There is some evidence that certain horizontal body types, such as, pear shaped individuals have increasing risk for diabetes.

We cannot change are body structure and proportionality. However self-awareness can improve our ability to identify opportunities, and risks.

Fashion experts describe vertical classifications as ideal proportions of vertical height of torso relative to legs; proportionally long legs to short torso; proportionally long torso to short legs; long waist; short waist; and balanced waist.

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When a person shorter than 5'4" comes into my clinic with proportionally tall torso and short legs I expect they have or will have back or neck problems. Chairs are designed for individuals 5'4" or taller. Individuals with proportionally more torso or spine have greater risk of developing back and neck problems. If legs are relatively short they do not reach the floor when sitting, and as compensation the individual sits on the edge of the chair away from the chairs back rest, slumps into the chair to reach the back rest, or the sit on their feet. Awareness of this disproportionality and risk for spine problems provides an opportunity to modify chair and work environment to account for the relatively short legs.

Men who are long wasted (top of pelvic bone is very close to the last rib) and relatively long legs are always going to have difficulty with the standard flexibility test of reaching for toes. The ribs bang into the tall pelvic bone, the relatively long legs and short torso it is unreasonable to expect the fingers to reach the toes without compensating for it with excessive movement in the thoracic spine. This same individual will have difficulty with fitness strength test of straight leg lift used to strengthen the abdominal muscles. There is not enough mass in the torso to counter balance when lifting the relatively long legs.

Shoes are made for male and female with shoe lengths from size 5 to size 22 as many as 10 different widths. Why are all desks 33" from the floor, and for a given car model there is no choice in which size car seat you can have. All car seats slide fore and aft, but after that the options to adjust the car seat can be someone limited. Generally there is one size office chair and it may or may not have ability to adjust the chair to match the wide variations of an individual's vertical and horizontal proportions.

If you have odd vertical and horizontal proportions when selecting equipment such as car seats, office chairs, and bicycles look for the ability to adjust the equipment to match your odd proportions.

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Parents can help guide children to choosing particular sporting activities by recognizing certain body types and proportions are better suited for certain sports. A few examples are as follows. Long torsos and short legs are advantageous for swimming. Long legs are advantageous for running. Short legs are advantageous for field hockey.

Bottom Line:

- Self-awareness of vertical proportionality can improve our ability to identify risks and opportunities.
- If your vertical proportionality is not ideal be aware of your odd proportionality when selecting equipment, such as chairs, cars, and bikes.
- Proportionality of vertical stature should be considered when applying standardized flexibility and strength tests

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