Training Disabled Clients:
Anatomy & Biomechanics

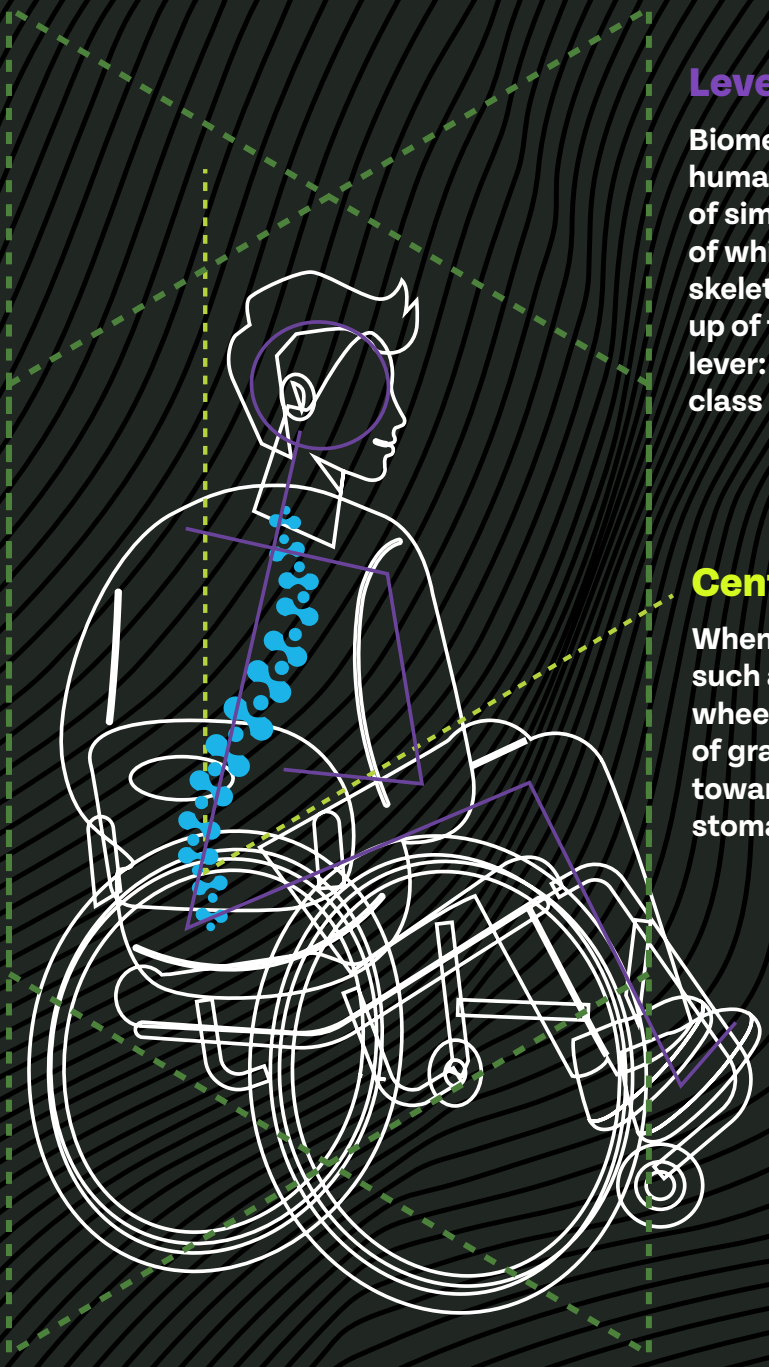
Assessing and training clients with physical disabilities requires you to not only understand the ways the body moves but also the ways in which certain conditions restrict and affect movement.

Planes of Movement

The human body's movements take place in three planes – sagittal, frontal and transverse – and many joints move in more than one plane.

Spinal Curvatures

The spine has four normal curvatures (e.g., the cervical curve, thoracic curve, lumbar curve and sacral curve) and can exhibit three common abnormal curvatures (e.g., lordosis, kyphosis and scoliosis). Abnormal curvatures can change the center of gravity and mobility of the spine.



Levers

Biomechanics treats the human body like a system of simple machines, one of which is the lever. The skeletal system is made up of three classes of lever: first class, second class and third class.

Center of Gravity

When someone is seated, such as when using a wheelchair, their center of gravity shifts forward, toward the front of the stomach.

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