

Segment Mass

Every segment in a Visual3D model has a mass, which is used to calculate kinetic quantities.

Default Segment Mass

The default segment masses defined in Visual3D are based on [Dempster's regression equations](#) and are (relative to total body mass):

Segment	Mass (% body mass)
foot	0.0145
shank	0.0465
thigh	0.10
hand	0.006
forearm	0.016
upper arm	0.028
pelvis	0.142
thorax/abdomen	0.355
head	0.081
trunk	0.497

Modifying Segment Mass

Users can modify Segment Mass under the [segment properties](#) tab in Visual3D's model builder.

Segments Segment Properties IK Constraints Right Thigh

Segment Name: Right Thigh

☒ Kinetic ☐ Kinetic But No Force Assignment ☐ Kinematic Only

Segment Mass: 0.1*Mass = 8.21 kgs

Segment Length: 0.420917 Meters

Segment Geometry: CONE

Inertial Values*		Center of Mass (Meters)*	
Expression	Value	Expression	Value
IXX:	0.12846	ML :	0*RTH_SEG_ 0
IYY:	0.12846	AP :	0*RTH_SEG_ 0
IZZ:	0.01735	Axial :	0.464927*RTI -0.195696

*May be modified for custom geometry

Model File: rthigh.v3g Browse

Material File: Browse

☐ Override Color Black

Rotate/Scale Graphic Model Copy Override Color to Active Subject

Modify Segment Coordinate System Apply Build Model

See Also

Go back to the [Segment Overview](#) for more information about segments in Visual3D.

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