

# Preparing Your Data

This chapter describes the formats for data files that can be imported into OpenSim. Generally, you must input the following types of data into OpenSim to generate simulations:

1. Marker trajectories
2. Ground reaction forces and moments and centers of pressure

You may also import joint angles to provide additional kinematic data. Marker trajectories must be specified in .trc files, and ground reaction and center of pressure data must be specified in .sto or .mot files. Joint angles must be specified in .sto or .mot files. EMG data may also be imported using .sto or .mot files, for example, to compare experimental EMG data to muscle excitations obtained from a simulation. Typically, motion data from Motion Capture systems are stored in the C3D format, OpenSim 4.0 has the capability of converting marker and force data from C3D files to .trc and .mot format. Further details can be found in the [C3D \(.c3d\) Files](#) page.

This section covers:

- [Collecting Experimental Data](#)
- [Coordinate Systems](#)
- [Marker \(.trc\) Files](#)
- [Motion \(.mot\) Files](#)
- [Storage \(.sto\) Files](#)
- [C3D \(.c3d\) Files](#)
- [Tools for Preparing Motion Data](#)

Next: [Collecting Experimental Data](#)