

# Biomechanics Core

Location: VA Medical Center 70-D-210

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Overview

Multiple specialty laboratories serve as "Biomechanics Research Core" facilities. Labs include electrohydraulic pistons and a separate bending-moment apparatus that apply simple or complex loads to biological or material specimens of various sizes. Custom-designed equipment to deliver blunt or blast brain injury to rodents and tissues are available. Additional devices include drop tower, pendulum impactor, pneumatically-driven servo-sled accelerator, and full-vehicle crash lab. High-speed video and 3D motion capture capabilities compliment over 400 channels of data acquisition equipment.

<b>3D motion capture systems</b>	<b>Facility technicians use on behalf of investigators</b>
<b>A computational lab with multiple high-end computer work stations</b>	<b>Use is available only after training</b>

Crash test dummies including the Hybrid-III and EuroSID dummies	Other limited use rental possible
Shock-wave tube for blast simulation on rodents	Facility technicians use on behalf of investigators
Shock-wave tube for blast simulation on cells and tissue	Facility technicians use on behalf of investigators
Rotational acceleration brain injury device for rodents	Facility technicians use on behalf of investigators
Motion-tracking software system	Use is available only after training
Finite element mechanics software	Use is available only after training

Hours: contact Christy Stadig, Laboratory Manager at (414) 384-2000 x41534 or [cstadig@mcw.edu](mailto:cstadig@mcw.edu) for availability and scheduling.

Common users of the facility: investigators who want to obtain mechanical or physical testing of specimens; for example, the Department of Endocrinology wrote a VA grant to mechanically test bone specimens; other basic scientists have written grants to use the brain