

I. Hormones/analytical

Hormones
Cytokines
Glucose
A1C
Lipids
Multiplex (MSD)
Human/animal



III. Energy Expenditure

Doubly-labeled water

- Total energy expenditure
- Activity-related EE
- Free-living (2 weeks)



Indirect calorimetry

- Canopy: Resting EE
- Whole-room



- Total, resting, sleeping EE
- Substrate oxidation
- Exercise metabolism
- Postprandial metabolism



IR camera

- Surface thermography

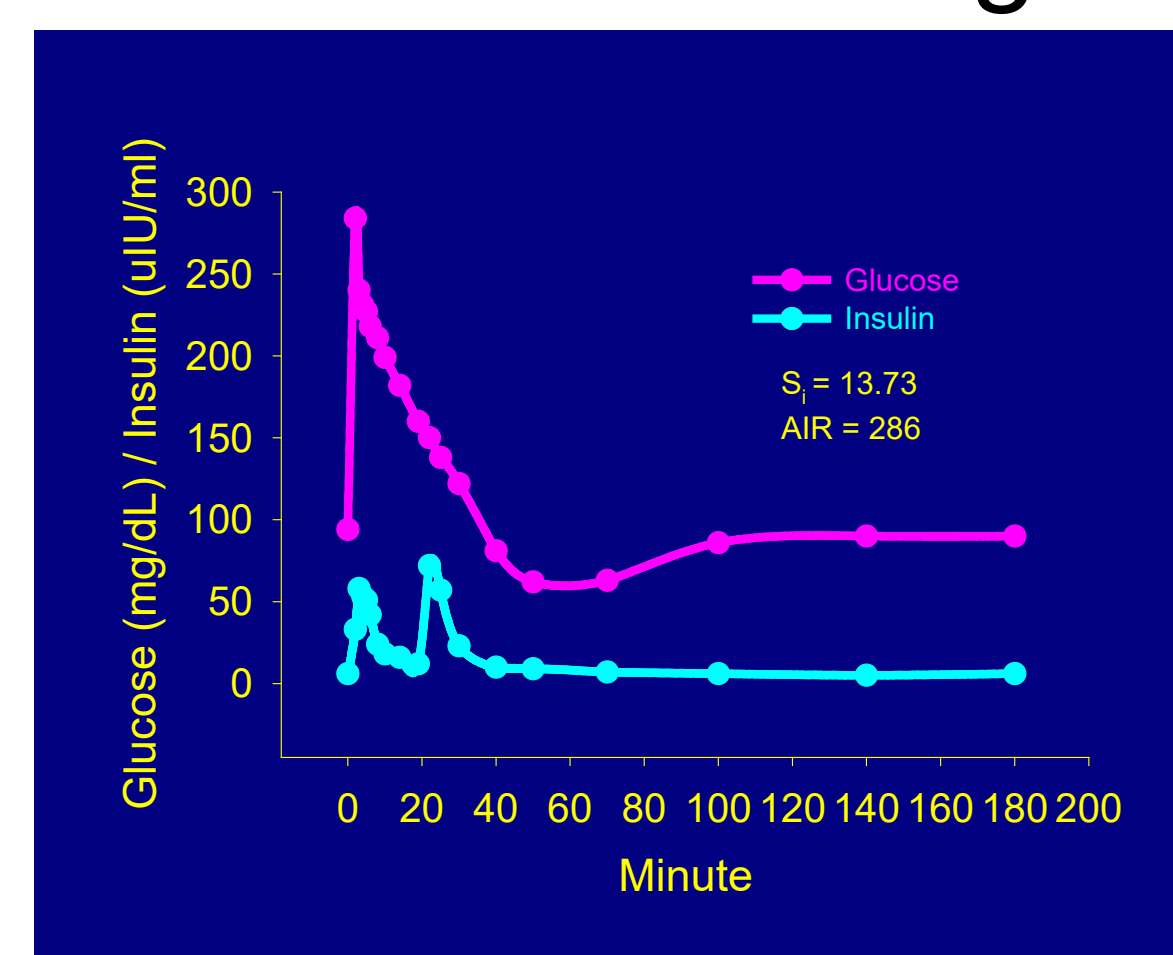
II. Insulin sensitivity/secretion

Insulin sensitivity

- Intravenous glucose tolerance test (IVGTT)
- Mixed meal tolerance test (MMTT)
- Oral glucose tolerance test (OGTT)
- Mathematical modeling

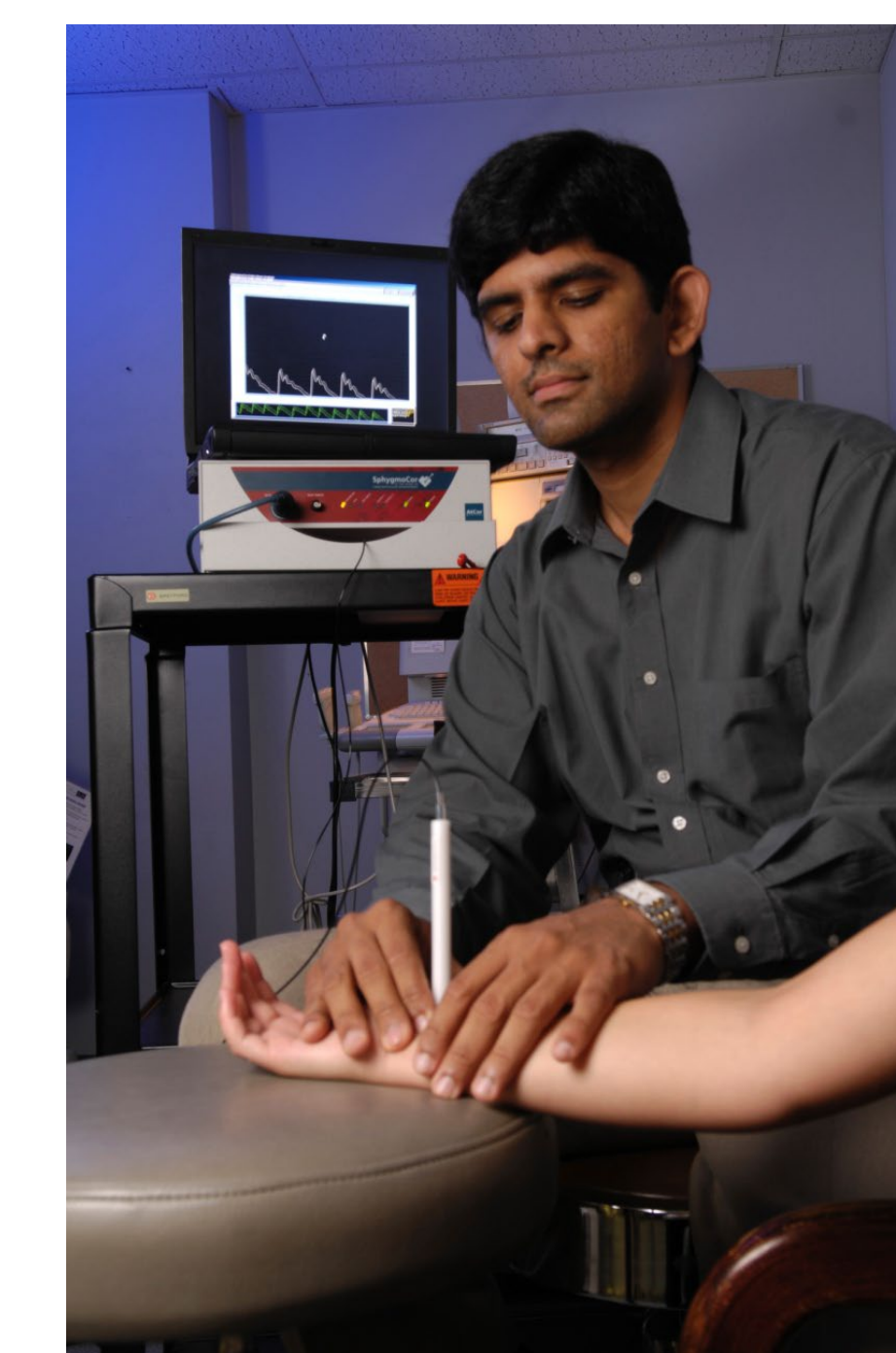
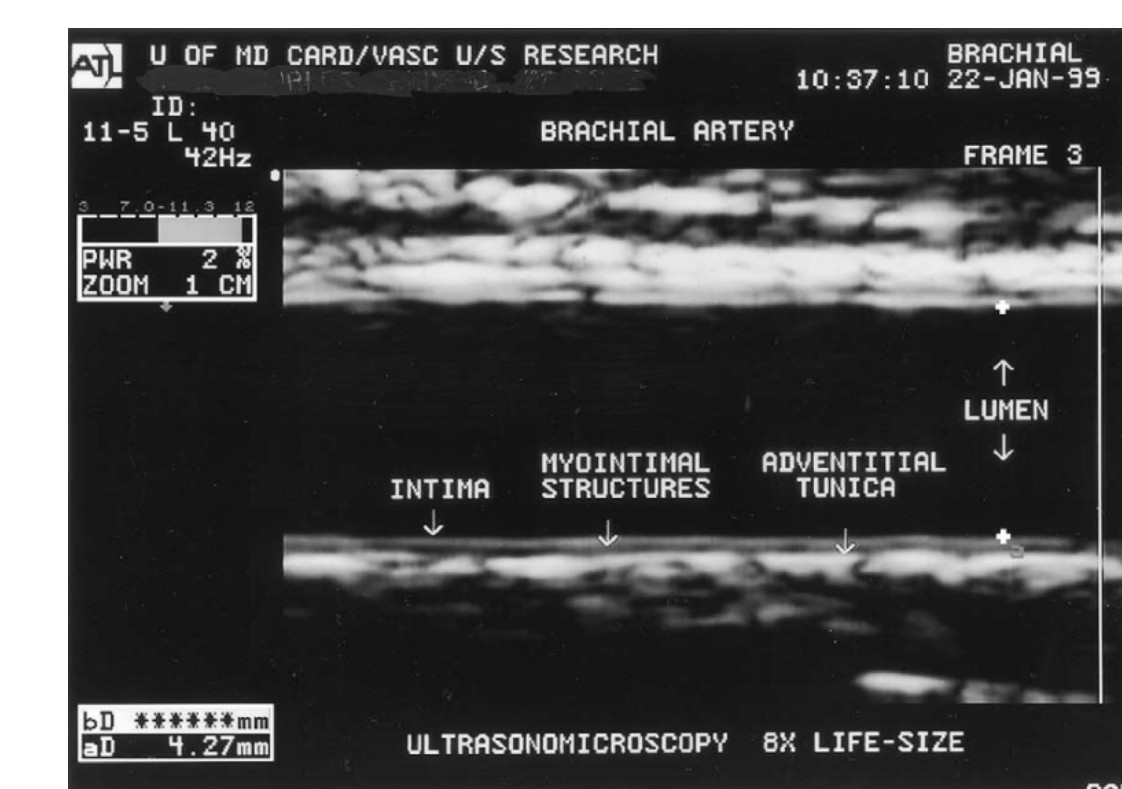
β -cell response to glucose

- IVGTT, OGTT, MMTT
- Mathematical modeling



V. Cardiovascular

Pulse wave velocity
Flow-mediated dilation
24-h blood pressure monitoring



IV. Body Composition

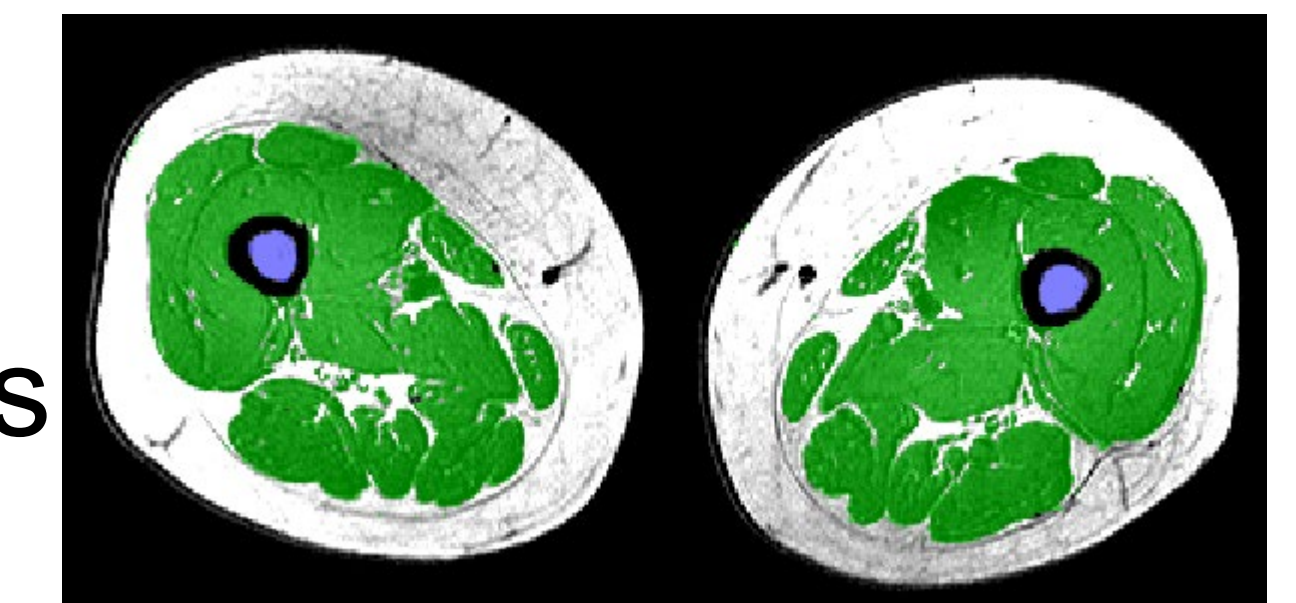
Dual-energy X-ray absorptiometry (DXA)

- Total fat, lean, bone mass

- Bone density
- Visceral fat

CT/MRI scan analysis

- Fat distribution
- Regional tissue composition



Bod pod (adults and children)

Pea pod (infant)

Total body water

BIA

Hand-held ultrasound



Core Personnel and Contact Information

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Body Composition/Energy Expenditure:
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Insulin sensitivity (modeling):
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Cardiovascular (CH19 115):
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Resting Energy Expenditure

Indirect Calorimetry