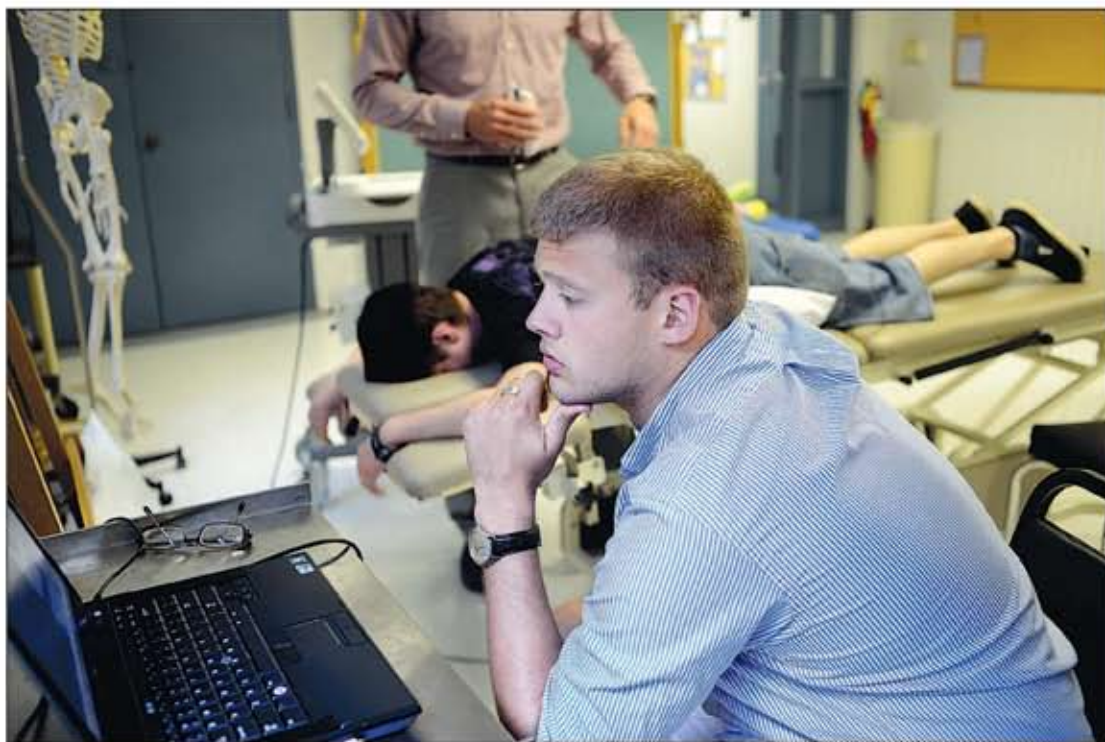


# Journal Star

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## Research team focuses on chronic back pain



DAVID ZALAZNIK/JOURNAL STAR

Bradley University mechanical engineering student Brandon Coates monitors readings on a computer screen reflecting the level of tension in the back muscles of a volunteer subject while those tension levels are measured by University of Illinois College of Medicine at Peoria medical resident Brian Andonian, in background.

### Volunteers needed for study on ankylosing spondylitis

BY PAM ADAMS  
OF THE JOURNAL STAR

PEORIA — A team of local researchers is looking for 18- to 45-year-olds, male or female.

They can earn \$25 for less than an hour of their time, but ...

Volunteers must be diagnosed with ankylosing spondylitis, or AS, an unusual form of chronic lower back pain similar to rheumatoid arthritis. Or volunteers don't have to have AS.

Ankylosing spondylitis is the most common form of chronic low back pain in young men, says the lead researcher, Dr. Alfonse Masi of the University of Illinois College of Medicine

at Peoria. "But this one stays and progresses and can lead to some disability as they age."

People who don't have AS can volunteer for the study also, as long as they don't have lower back pain.

Whether they have AS or not, people who participate in the study will be working with a former athletic trainer who is now a UICOMP medical student and mechanical engineering students at Bradley University.

Also, whether they have ankylosing spondylitis or not, they'll be helping Masi in his 10-year quest to expand

### BACK PAIN STUDY

For more information about the collaborative UICOMP and Bradley University bio-mechanical study on ankylosing spondylitis, contact Brian Andonian, [bandon2@uic.edu](mailto:bandon2@uic.edu).

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JOURNAL STAR, PEORIA, ILL.



DAVID ZALAZNIK/JOURNAL STAR

Sensors attached to a volunteer relay information to a computer program during a study of tone and stiffness in lower back muscles.

### STUDY

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conventional medical notions about the disease.

"In all the studies on AS, this hasn't been done before," says Kalyani Nair, an assistant professor of mechanical engineering at Bradley, which is collaborating with UICOMP on the study.

The clinical research study measures and compares muscle stiffness in AS patients to people who don't have AS. People who have AS tend to have tighter, stiffer muscles at rest, Masi says, while others have softer, more flexible muscles.

Local rheumatologists referred ankylosing spondylitis patients to Masi and his team. Researchers have already tested 18 people with AS and about 30 control subjects — people who don't have lower back pain. Now they're looking for more AS patients.

"We know there's one in 1,000 people who have the condition," says Brandon Andonian, the fourth-year medical student working with Masi. "We're trying to find the people we've

“It's constant throughout the day. It's hard to pick up laundry, hard to tie shoes, hard to stand long enough to do dishes.”

AS patient Christopher Powell of Pekin

missed. We suspect there are others living in the area.”

Their goal is to recruit a total of 30 to 40 people with ankylosing spondylitis and 100 people without it and no lower back pain.

While most AS research focuses on the autoimmunity and inflammatory aspects or genetic markers connected with the disease, Masi says that doesn't go far enough in explaining other characteristics of the disease. He argues muscles have certain tightness, tone and stiffness that vary from person to person and those characteristics also play a role in developing AS. That's where Bradley and bio-mechanics come in.

Bradley has a device, the MyotonPRO, that can take accurate, painless, sophisticated measurements of soft tissue. "Look at steel, rubber and wood, they have unique characteristics," Nair says. "But people don't understand the unique properties of

soft tissue. Bio-mechanics studies the properties of muscle tissue.”

And the team is studying how those properties are related to ankylosing spondylitis.

"This is completely new and difficult," Masi says, because most experts resist incorporating a new line of reasoning. "But sometimes we have to expand our diets.”

Christopher Powell, 23, of Pekin had no problem considering a new line of reasoning that could contribute to better diagnosis and treatment for a disease that has no cure.

Diagnosed with AS about 18 months ago, he has struggled with lower back pain since he was 17.

"It's constant throughout the day," Powell says. "It's hard to pick up laundry, hard to tie shoes, hard to stand long enough to do dishes.”

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