

Aging Heart Valves Module – Cardiac Valves Research: Expert Interview

“Multiple Perspectives”

I'd like to introduce Josh Hutcheson, a doctoral candidate at Vanderbilt University who works in Mechanobiology.

Interviewer: What is important to know about the heart and how it works in relation to disease?

Mr. Hutcheson: When looking at a biological system, we spend a great deal of time looking at it on the cellular level. We are looking for the intersection between cell biology and engineering/physical science. Understanding the stresses put on cells helps us understand what is happening to an organ.

Interviewer: How does the structure of the heart relate to the stresses it incurs?

Mr. Hutcheson: Heart valves are designed to move with blood flow, and consequently experience a lot of stress over time. Biomechanics plays an important role in the function of these valves.

Interviewer: Can this stress lead to problems with the valves/heart over time?

Mr. Hutcheson: Stress can cause the valve to become stiffer over time. 25% of people over 65 years of age tend to show signs of valve disease.

For additional information on heart valves, the following video link might be helpful:

<http://www.youtube.com/watch?v=hmnzhuYRjz8>