

### **In-Lab Data Collection**

Over the course of two-hours, researchers will measure a participant's body dimensions and record their body weight and composition. Researchers will ask that participants change into tight-fitting clothing provided by the investigators. This laboratory clothing is necessary for researchers to measure body shape accurately. Researchers will use water-soluble face paint to put dots on a participant's body at several locations. Researchers will use camera-based systems to record the three-dimensional shape of a participant's whole body, including the head and face. Researchers will also use manual instruments, like tape measures, to record a participant's body dimensions. Participants will need to hold still in specified postures for up to 15 seconds during these measurements. Researchers will measure a participant's grip strength using a force-measurement gage.

During most of the study, participants will sit in a mockup of a vehicle interior and assume either a driver or passenger posture. Researchers will record a participant's body posture using a camera-based system and using a mechanical coordinate measurement device. The investigator will touch parts of a participant's body to locate body landmarks, such as the top of your sternum, and touch the measurement device to these locations to record their position. Some landmarks needed to measure safety belt fit are in the pelvic region at the front of the hip bones. Participants will need to hold still for about a minute for each of these measurements. Participants will be asked to get in and out of the vehicle mockup multiple times as the investigators change the seats and other test conditions. Researchers will take photographs of each participant to document their posture in each condition.