

# BALANCE changes during pregnancy

NECK VERTEBRAE ANGLE FORWARD

SHOULDERS PROTRACT

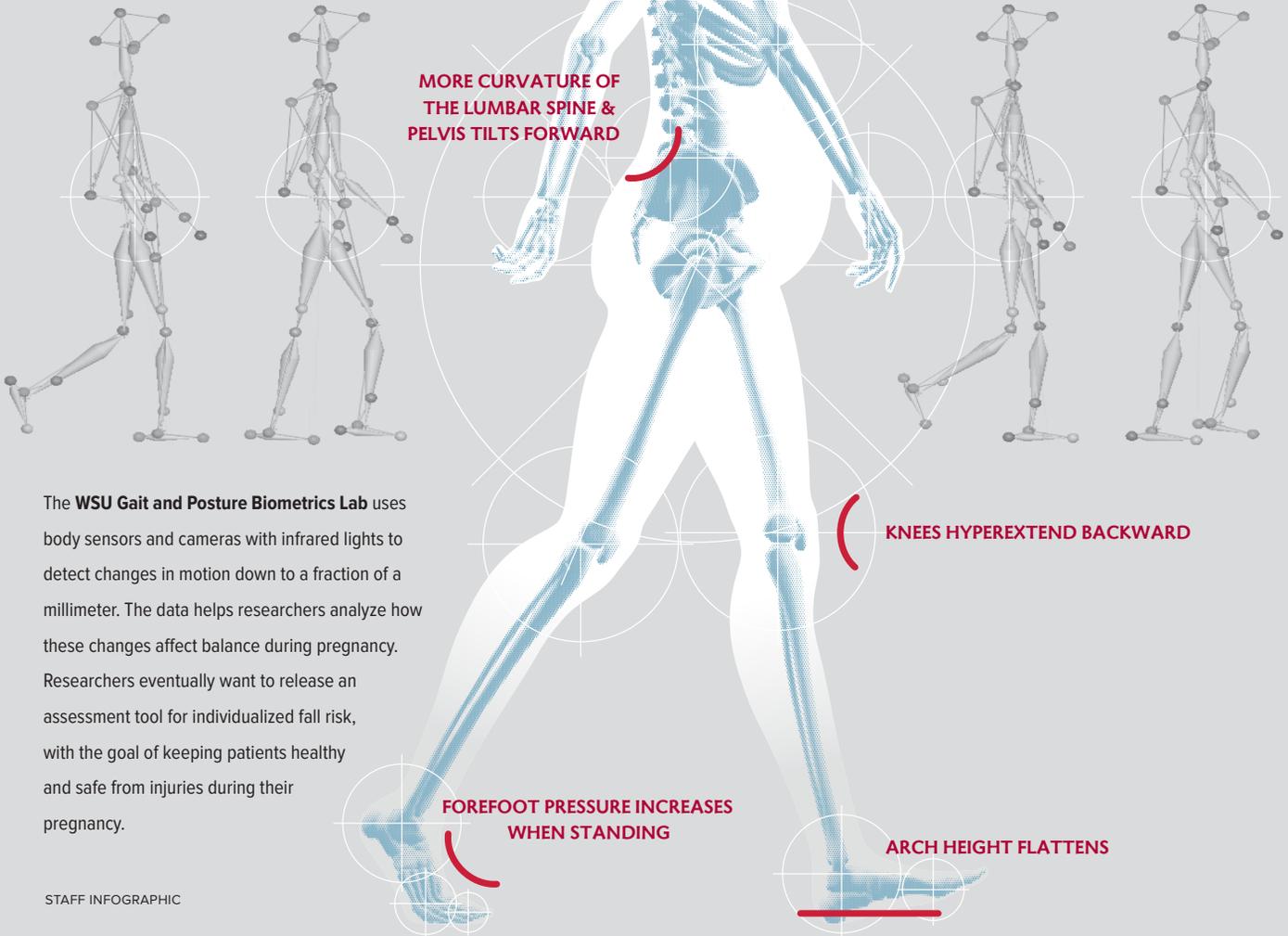
MORE CURVATURE OF THE LUMBAR SPINE & PELVIS TILTS FORWARD

**FALLS DURING PREGNANCY**, often as a result from changes in balance, are a leading cause of gestational injury and fetal death—with increases in musculoskeletal injury, cesarian delivery, and premature labor. Currently, the relationships between the many physical, physiological, and even neurological changes during and after pregnancy are poorly understood.

KNEES HYPEREXTEND BACKWARD

FOREFOOT PRESSURE INCREASES WHEN STANDING

ARCH HEIGHT FLATTENS



The **WSU Gait and Posture Biometrics Lab** uses body sensors and cameras with infrared lights to detect changes in motion down to a fraction of a millimeter. The data helps researchers analyze how these changes affect balance during pregnancy. Researchers eventually want to release an assessment tool for individualized fall risk, with the goal of keeping patients healthy and safe from injuries during their pregnancy.