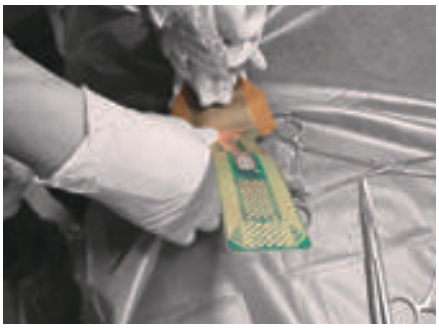
EXPERIMENTAL PROTOCOL OF PRESSURE CONTACT BETWEEN JOINTS

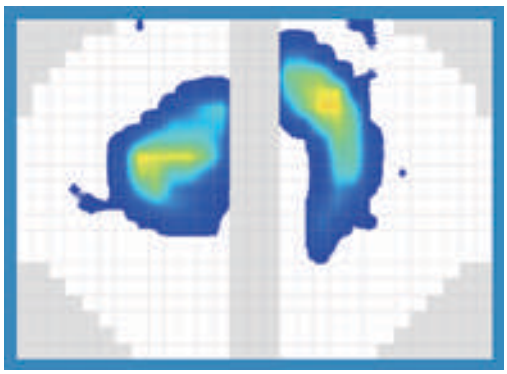
PROJECT INTRODUCTION

A university laboratory needed to study the pressure distribution in the ankle and hip joints. A model was used to simulate the changes in joint pressure, and after measurement by orthopedic-specific sensors, the results of the joint pressure were satisfactory.

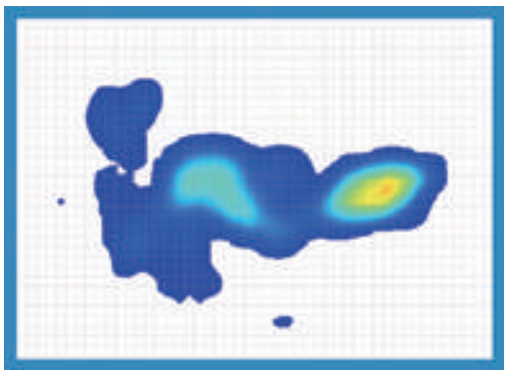
In order to better carry out academic research, real skeletal joints were used, and measurements were made by pressurizing them with a robotic arm. Membrane pressure sensors were placed into the skeletal joints to test the meniscus-related forces.



MEASUREMENT RESULT



CN0204-2Y Image Display Interface



CN5051 Image Display Interface

With different sensors, the pressure distribution in different joints can be measured, which can be effectively used in experimental studies of tendon remodeling and meniscus repair.

USE

Simulated Tendon Reconstruction
Simulation of meniscus
repair surgery

ADVANTAGES

Sensor conforms to joint dimensions
Accurately measures pre- and
post-operative
Changes in joint pressure

EQUIPMENT: D2

General Purpose
Distributed Pressure
Measurement System
DPM-G

MODEL	CN0204-2Y
Sensing area	27mm*43mm*2片
No. of sensing points	454, 21rows*26columns
Point density	22.7points/cm²
Pressure ranges	100psi

MODEL	CN5051
Sensing area	57mm *57mm
No. of sensing points	1936, 44rows*44columns
Point density	59.2points/cm²
Pressure ranges	10/50/150/250psi