



Research Group in Breast Health

Aims

To improve women's quality of life by:

- Broadening the understanding of the breast
- Informing breast support design
- Raising awareness of an important issue for women

About Us

Following extensive work in the area of breast biomechanics, the Research Group in Breast Health was established in June 2008 with the aim to improve women's quality of life. The research group is headed up by Dr Joanna Scurr, with significant input from other researchers and academics at the University of Portsmouth: Jenny White, Wendy Hedger, Alex Milligan and Debbie Risius.

Background

WHY? Breast pain can impact upon the performance, health and well-being of women; 45% to 60% of British women suffer with breast pain. Due to the minimal structural support in the breast, excessive breast movement may lead to breast sag. Breast pain and breast sag may cause a loss of self-esteem, reluctance to exercise and ultimately a decreased quality of life. Breast science and particularly breast biomechanics is under-investigated, under-reported and under-emphasised.

HOW? Appropriate breast support is an effective treatment for breast pain and may help prevent breast sag. It is important that women of all breast sizes are wearing appropriate breast support, although up to 70% are reportedly wearing the wrong size bra! We have found that breasts move an average of 10 cm in three-directions (up/down, side/side and forwards/backwards). We aim to research many aspects of breast health during exercise and during daily activities.

Facilities and Capabilities

- An eight camera (500 Hz, full resolution) Oqus automated tracking system incorporating 2 high speed (1000 Hz, full resolution) cameras .
- Two Kistler 9281C force plates that can be mounted in different configurations in the laboratory, with additional floor mountings in a sports hall and a dance studio also available
- Visual 3D software is used to analyse motion, force and EMG data to estimate joint moments and create musculoskeletal models.
- An eight channel online and eight channel wireless EMG system (Biometrics Ltd, UK) for measuring muscle activity
- Force transducers and accelerometers (1000 Hz)
- 50 Hz camcorders

Workshops

We offer one day Breast Science workshops that can be tailored to meet your objectives. Content suggestions; breast anatomy, the importance of breast support, facts about breasts, problems associated with breasts (pain, sag, etc), breast movement in sport, problems associated with bras, bra construction, appropriate breast support (support, comfort, aesthetics, fit, etc), market reviews, fit workshop.

Participation: We are always looking for women of all ages, shapes and sizes to take part in our research. If you would like to be involved, please email us at breastresearch@port.ac.uk or call 02392 845161.

