Research Group in Breast Health, University of Portsmouth

Breast Health News

January 2014
Issue two

Welcome to the second issue of the Research Group in Breast Health newsletter from the University of Portsmouth.
The group, led by Dr Joanna Scurr, is internationally renowned for conducting pioneering fundamental and applied research into this important aspect of womenÕs health.

Breast pain can impact upon womenÕs performance, health and wellbeing. With up to 60 per cent of British women suffering from breast pain, it is more widespread than many realise. Appropriate breast support may be an effective treatment for breast pain and breast sag. Therefore, we formed in 2005 with the aim of improving womenÕs quality of life by:

- broadening the understanding of the breast
- informing breast support design
- raising awareness of an important issue for women

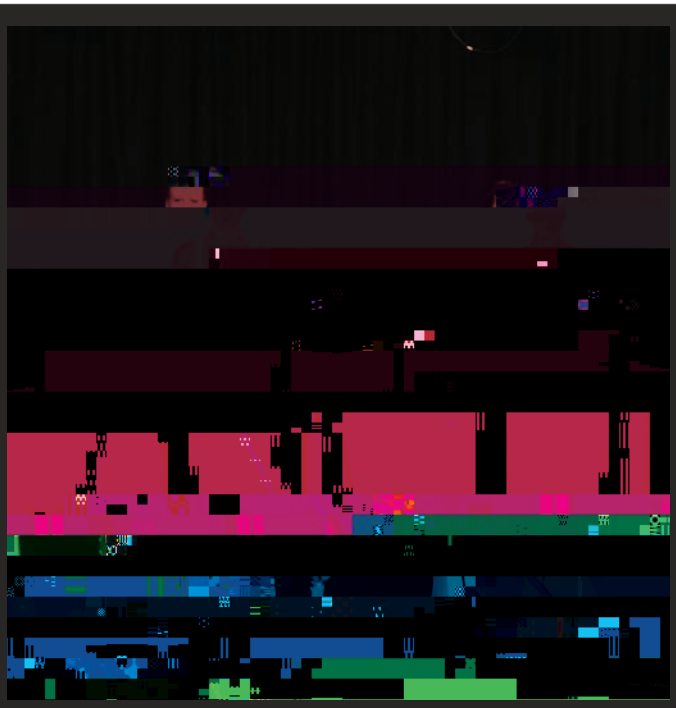
University of Portsmo

First scientiÞc bra test house in the UK

The Research Group in Breast Health has developed the Þrst scientiÞc bra test house in the UK. For years we have been investigating the performance of bras, both for scientiÞc research purposes and in collaboration with brands around the world, and demand for this type of product testing has grown hugely.

The University of Portsmouth has supported this initiative with a huge investment in facilities and resources for this test house. New laboratory facilities and an increase in our equipment capabilities mean that we are able to offer off-the-shelf bra testing quickly and at highly competitive rates.

For more information, please email Dr Joanna Scurr at joanna.scurr@port.ac.uk.



Bounce reduction being assessed in our laboratory

Breast pain affects one third of female marathon runners

Out of the 1,285 female runners who took part in research conducted by the Research Group in Breast Health (RGBH) at the 2012 London Marathon, 32 per cent experienced breast pain. The RGBH attended to assess the prevalence of breast pain among active young women there.

One third of female runners experienced breast pain in the 2012 London Marathon

Results showed that women who experienced breast pain had larger breasts, higher body mass index (BMI) and no children. Although breast pain was prevalent among larger-breasted women, 24 per cent of women with small breasts (A cup and smaller) also experienced breast pain. Exercise was the most frequently reported factor contributing to breast pain, with vigorous exercise being particularly aggravating. Over half of breast pain sufferers described it as discomforting and 17 per cent reported changing their exercise behaviour due to breast pain.

Despite these Þndings, the majority of women (44 per cent) did nothing to overcome their pain. A well-Þtting sports bra has been shown in previous research to be more effective than pharmaceutical intervention in the treatment of breast pain, highlighting the need for further research and educational initiatives to allow women to exercise in comfort.

Brown, N., White, J. L., Brasher, A. and Scurr, J. C. (2013). The experience of breast pain (mastalgia) in female runners of the 2012 London Marathon and its effect on exercise behaviour. *British Journal of Sports Medicine*.

Key Þndings from our research on appropriate breast support

For full scientiÞc publications, please visit
. o .a . /b a a .

2007
- Sports bras are equally effective across breast sizes (53 per cent movement reduction for A cup and 55 per cent for G cup).
- Encapsulation sports bras are more effective at reducing breast movement.

2008
- Breast movement is out of sync with the body during running.
- Running surface (ground or treadmill) has no effect on breast movement.

2009
- A Þgure-of-eight movement pattern for the breast is identiÞed during running.
- Women exert larger sideways forces on the ground when running with poor breast support.

2010
- The breast is better able to resist deformation and is quicker to return to its natural position when wearing a sports bra compared to an everyday bra.
- Breast discomfort does not differ between sizes during jumping and agility activities.

2011
- Wearing a bra reduces the strain at the nipple by lifting the breast.
- Unsupported breast movement increases from 4cm during walking to 15cm during running.
- During running, the breast moves beyond its static limits by 2cm downwards, 1cm sidewards and 2cm backwards.

2012
- For a woman of average height and underband size, a 20 per cent reduction in body mass would be required to achieve a one cup size reduction in breast mass.
- The traditional method of bra Þtting overestimates band size and underestimates cup size, becoming less accurate with increasing band size.

2013
- A polyester sports bra demonstrates greater thermal comfort and enables better cooling than a composite sports bra.
- From marathon runners surveyed, 32 per cent experience breast pain, with 17 per cent reporting that breast pain affects their exercise behaviour.
- Methods used to overcome breast pain include pain medication and Þrm breast support.