

[Previous Story](#)[Next Story](#)*Article rank* | *13 May 2013* | *The Gazette* | *JILL BARKER*

The science behind a sports bra

INDUSTRY LACKS STANDARDS and is still unable to ensure that all are made equal

Sports bras have come a long way since 1977 when the first model was fashioned out of two jock straps. Yet despite the multitude of styles to choose from, the body of research supporting the design of today's sports bras is sparse.



Born of the need to reduce the amount of painful breast movement during athletic activity, one study found that a sports bra added 25 per cent more support during a treadmill run than did a regular bra.

Initially, women had only one style of sports bra to choose from. High necked, wide-shouldered with a wide bottom band, compression sports bras are based on the premise that using tight stretchy material to flatten breasts against the chest wall is the best way to minimize movement. The straps hold the bra in place while the wide bottom band and high, tight neckline are tasked with limiting the up-and-down

movement of the breasts.

For the most part, compression bras work, but often at the expense of comfort. The tight bottom band and the lack of opening in the back or front make it difficult to get the bras on and off, especially for women with large breasts and/or a wide back. Large-breasted women also found that the high degree of compression needed to keep their breasts from moving resulted in significant discomfort.

That lack of comfort discouraged many women from exercising and sent researchers back into the lab to see if they could come up with a better design. What they discovered is that encapsulating the breasts is just as effective as compression at reducing breast movement during activity, but without the binding discomfort of previous designs.

Encapsulation sport bras support each breast in a separate structured cup equipped with extra support above and below the breast. Most also include clasps in the back, making it easier to get on and off. They have the same wide straps as compression models, but tend to look more like a traditional bra, albeit with substantially more support.

Design improvements and the reality that not all women are built the same have caused an explosion in the sports bra market. Yet despite the fact that there's science behind what constitutes an effective sports bra, the industry lacks a standardization of design to ensure that all sports bras are made equal.

Do cross-strap designs offer the same support as traditional racer-back bras? How thick should the straps be, and how high should the neckline go to ensure proper support? All of these features vary considerably between styles, leaving the consumer guessing. And for a small number of women, generally those with large breasts, the perfect combination of fit, fashion and function still remains elusive.

Understanding the need for a bra with even more support, a team of Australian researchers wondered whether elevating the breasts was the answer. To test their theory, they designed a bra that combined both breast compression and elevation (they placed one-centimetre, high-density foam pads into the cup of the experimental bra) into an encapsulation bra.

Turns out that elevating the breasts provided little improvement in the amount of bounce as compared with a traditional encapsulation sports bra. What it did offer, however, was added comfort and a perception by the test subjects, all of whom also tested a traditional encapsulation bra and a placebo bra, that their breasts moved less.

"These results provide scientific evidence upon which to base the design of sports bras, particularly for women with large breasts, so that their breast-support options are both functional and comfortable," the study's authors said. "Such improvements in sports bra design can enable women with large breasts to exercise in greater comfort, allowing them to enjoy the health benefits associated with participating in physical activity."

Hopefully, this kind of science is another step forward in the search for a bra that will help all women, no matter their shape or size, exercise comfortably.

WHAT TO LOOK FOR IN A SPORTS BRA



Do the jump test: Strong, stretchy fabric with some kind of restrictive or supportive material above and below the breasts should hold the breasts firm while you jump up and down, so make sure to test it. Bottom band: It should be tight without being restrictive and keep the bra in place, even when you raise your arms overhead. Breathability: Opt for technical fabrics that breathe with optional ventilation panels to further enhance breathability. Soft and Seamless: All seams, clasps and hooks should be covered to prevent chaffing and rubbing. Straps: Straps need to be wider and with less give than a traditional bra. They should also be positioned right above the nipple, which reduces the amount of

breast movement. Look for racer-back or cross-back models if you experience trouble with the straps staying put while exercising. Fit: All of your breasts should be covered or encased in the bra's cups. The bottom strap should rest on your breast bone, not on your breasts.

Printed and distributed by NewspaperDirect | www.newspaperdirect.com | Copyright and protected by applicable law.

[Previous Story](#)

[Next Story](#)