

# BOOB ARMOUR

## *Sports Protective Breast Inserts Can Aid In The Prevention Of Breast Injury*

### FEMALE BREAST INJURY IN SPORT - THE RESEARCH

Due to the motion of the female breasts during running, and the vulnerability of the breasts to impact injury in contact sports, breast pain and breast injury are potential issues for female athletes across a range of sporting activities.

*Firstly, breast pain during running may be a hidden concern of the female athlete.*

Due to the weak intrinsic support in the breast, physical activity such as running causes significant independent breast movement, mostly in the vertical direction (Scurr et al. 2011) especially in individuals with large breasts (Wood et al. 2012).

In the general population, 44–72% of women have reported experiencing exercise-induced breast pain when they participate in sport and exercise (Brown et al 2016, Scurr et al. 2014). This breast pain can often be severe enough to limit a woman's participation in physical activity (McGhee, et al, 2013, Brisbane 2020)

One simple strategy that has been shown to effectively relieve up to 85% of breast pain symptoms during running is wearing a properly fitted, support bra (Hadi 2000), which can reduce breast motion and, in turn, reduce breast pain (Bowles et al 2008)

McGhee and Steele (2010) proposed the inclusion of thick foam pads inside the cups of an encapsulation sports bra to elevate and compress the breasts, thereby reducing vertical breast displacement and exercise-induced bra discomfort. Joanna Scurr, Professor in Biomechanics, and Head of the Research Group in Breast Health in the UK also advocates the use of encapsulation and overlying compression in a sports bra. Larger breasted runners may require even stronger support to elevate the breasts (White et al 2012)

So, one important aim of Boob Armour Inserts is to increase breast support and help reduce breast movement during running and jumping. Boob Armour cups/inserts, which are only 2mm thick, provide the moulding and support, and the sports bra provides the overlying compression, making Boob Armour the optimal protective device for the female breast during running.

An additional problem of breast movement during running is that women risk damaging the fragile Cooper's ligaments which help support the breast and which, once damaged, are irreparable. Strain of these tissues may lead to or accentuate undesirable breast sag so breast support during sporting activities is important

*Secondly, due to the location of the breasts on the anterior chest wall, female breasts are also vulnerable to impact injury during sport.*

In a 2018 American study, 46.7 per cent of 90 female college soccer players reported sustaining a breast injury, yet only 5 per cent reported it to anyone. 12 per cent indicated that the injury affected their participation. Staggeringly, 98 per cent of those who experienced a breast injury were not wearing any protection other than a regular sports bra (Smith et al 2018)

In a much larger 2020 survey and assessment of 207 female Australian Football League (AFL), Rugby League, Rugby Union (XVs) and Rugby 7s players, fifty-eight percent of players reported ever experiencing a contact breast injury and 48% perceived that their injury affected their football performance (Brisbane et al 2019).

In the same AFL group, most players (87%) reported wearing a sports bra, however 52% wore an ill -fitted bra which might compromise its ability to protect the breast, and only 31% perceived their bra provided any protection against contact breast injuries. Greater education on breast support and bra fit is required (Brisbane et al 2020)

There is substantial literature outlining the negative effects of deep bruising to the female breast tissue (Smith et al 2018, Brisbane et al 2020). It has been shown that significant impact bruising to the female breast may result in the formation of hard nodules/ lumps in the breast tissue (Kerridge et al 2015). While not a cause of breast cancer, down the track these lumps can be difficult to differentiate from breast cancer, and several tests causing personal stress and with increased medical costs may be needed before breast cancer can be ruled out (Gatta et al 2006)

Therefore, the other important aim of the Boob Armour Inserts is to protect the female breast from impact injury. In summary,

**Boob Armour aids breast support, helps minimize unwanted breast movement during running and jumping, and protects against impact in contact sports.**

Boob Armour Protective Inserts are made from polyethylene material similar to that passed by European CE certification for use as a Martial Arts women's chest protector. EN 13277, EU 2016/425. CE approval is mandatory for this protective equipment in European karate competition and also by AIBA for use in female Boxing.

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