

## Newly published standard, with requirements for belts and harnesses in seating

**What are lap belts for? In wheelchairs, shower chairs, or other seating systems, some are designed for restraint in an accident, some just for safety to protect the occupant from falling out, and some for postural control (known as postural support devices or PSDs). The design and positioning for each of these different functions is different**

Postural support devices, such as positioning supports, have a specific purpose, which is to support an individual, to help maintain and increase day-to-day functionality for the individual, and to protect against the development of skeletal deformities, or to correct them.

These devices, with their postural support purposes, are not to be confused with safety belts and similar devices designed to act as vehicular occupant restraints, nor with simple 'safety' belts. The records of MHRA (Medicines & Healthcare products Regulatory Agency) show that over the last 15 years there have been four reported deaths and 17 serious injuries in the UK involving, or attributed to, failures relating to pelvic posture supports or anterior trunk postural support devices.

These deaths are thought to have occurred as a result of inappropriate placement, adjustment, or failure of the supports.

### 'Let's Get it Clear' by Dr Barend ter Haar

One in a series of occasional resumés of aspects in the world of posture and mobility where there are common misconceptions, and myths to be addressed, to help promote better practice. Further items can be found at [www.beshealthcare.net](http://www.beshealthcare.net). If you are interested in receiving further information on the topic, please contact [barend@beshealthcare.net](mailto:barend@beshealthcare.net).

Dr ter Haar has been involved in seating and mobility for over 30 years, including lecturing internationally, and developing international seating standards.

Users appear to be confused as to best practice, and the reasons why postural supports need to be placed and adjusted according to the occupant's needs.

The MHRA originally provided guidance in the UK on the placement of pelvic positioning supports, but the advice was in effect more appropriate for wheelchair tie down and occupant restraint systems, rather than positioning supports. This advice was updated in 2015 in MDA/2015/018 [1]. This new guidance placed the onus on the manufacturer or equipment prescriber to decide what might be best for an individual; although with minimal guidance on how this is to be ensured. This introduced the risk of a variety of interpretations, which might not be consistent, and which could cause further confusion.

For this reason, a British Standard, BS 8625 [2], has been produced which specifies requirements for the selection, placement, and fixation of flexible postural support devices within seating devices and systems, including wheelchairs. Seating postural support devices (PSDs) can be involved in one or more situations, including static seating, wheelchair seating, shower chairs, etc. The PSDs enable the seated person (the occupant) to be positioned to maximize their functional activities in a safe environment. These requirements have a balance of maintenance of posture and of safety. This British Standard has been created for use by clinicians, engineers, carers, occupants, manufacturers, retailers, and repairers.

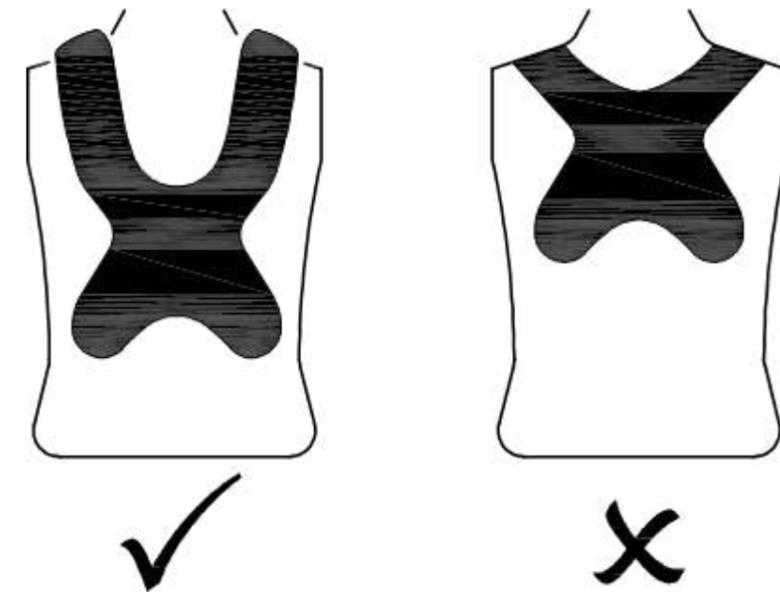


Figure 15 from BS 8625 showing the new label for use with chest or shoulder harnesses

BS 8625 gives guidance on the benefits and downsides relating to the appropriate vs inappropriate choice and positioning of belts and harnesses, including topics around: restraint vs positioning, safety, paediatric positioning, materials, and transportation. Specific advice is provided around pelvic positioning, and then trunk, leg, foot, head and wrist support.

There are instructive annexes on: A. How to measure a person; B. How to measure a PSD; C. The difficulty relationship between the operability of PSD and cognitive and/or physical dexterity level of occupant; D. PSD mounting devices; E. Prevention of risk of asphyxiation.

Apart from the specified requirements – i.e. the 'shall' specifications (such as: "Seating systems and wheelchairs shall be supplied with space available to mount PSDs in the positions required by this British Standard"; "PSDs shall be tested in accordance with the tests in ISO 16840-3, and have passed the tests"; etc.) – there are commentaries setting the scene for the requirements.

In BS 8625, clinicians now have access to definitive information which was previously missing from the MHRA guidance. Following the requirements within BS 8625 will lead to better outcomes, and improved safety for medical equipment users.

[1] MEDICINES & HEALTHCARE PRODUCTS REGULATORY AGENCY. MDA/2015/018. All posture or safety belts fitted to supportive seating, wheelchairs, hoists and bathroom equipment. London: MHRA, 2015.

[2] BS 8625:2019 Selection, placement and fixation of flexible postural support devices in seating London: BSI, 2019.