



Let's Get It Clear No.17

First published in THIIIS May 2021

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Seat to Eat

We have different postures to achieve different outcomes in life. Different activities require us to line up our feet, our legs, our pelvis, our torso, and our head in different respective positions. In this article, we look at what might be considered a good posture for eating, and how our seating set-up can help or hinder us.

We wear different footwear for different activities – football boots for playing football, ski boots for skiing, trainers for running, smart leather shoes for formal indoor events, slippers in the bedroom, flippers for scuba diving, etc.

Along the same line of thinking, for those people who, in particular, have physical challenges arising from small size (including children), old age, diseases, or disorders, we should consider different seating arrangements for different activities. These different activities can range from relaxing to watch the television, through getting access to normal day-to-day activities, to working on a keyboard, to eating a meal, to access to toilet facilities, to transferring to bed for a good night's sleep.

The need for adjustability

If you place yourself into the optimal position for any one of these activities, you may well find that your head, shoulders, hands, pelvis, and feet end up in very different positions relative to each other for each activity. To assist those people with impaired movement, it is essential that the equipment with which they are provided allows, and ideally assists, their getting into the best posture for that one activity, and then change it for the next activity.

For many of us, we have different chairs for our office, for dining, for watching television, etc., but it is often not readily affordable/practical to supply a mobility-impaired person a different chair for each activity. Thus we should consider what can be done to make the equipment that is provided as adjustable as possible to accommodate the needs of the different activities that that person wishes to perform. In this article, we'll be looking at what adjustments may be needed, and how they can be offered, with particular attention to seating for eating.

Seating for eating

The starting point is getting food to the mouth. Ideally, we like to have our head over our plate or bowl so that

any food that drops arrives back on the plate and not down our front. To achieve this, our feet are best placed vertically below our knees or further back.

In many care homes, residents are brought to the table in their transfer manual wheelchairs. In this type of wheelchair, the foot supports are often placed forward of the castors, pushing the feet forward, and the occupant back into a spinal kyphotic position, with the head away from the table. Not ideal!



Furthermore, the more the spinal curvature, the more the person needs to push their heads back into cervical extension to get their heads level to put their food into their mouths. For those who have been taught CPR, we are told to push the person's head back to open the airways.

This is the position that the head ends up at with the cervical extension when the head and neck position are compensating for the curvature of the spine. So a folding transit wheelchair is not suitable for an elderly person to use at the dining table. More on this later.

For optimal swallowing and digestion, we want the trunk to be as straight and upright as possible. This position also helps with breathing and other physiological functions encompassed within the trunk. To achieve this, ideally, the individual needs appropriately positioned supports to facilitate this posture: a firm back support to resist the development of spinal lordosis, a pelvic positioning belt placed across the thighs to stop the pelvis slipping forward¹, lateral trunk supports to help maintain a midline position, and, as needed, an anterior trunk support.

A number of wheelchairs provide for tilting the seat back to help relaxation. From what we have outlined above, being able also to tilt the seat forward as well could facilitate getting the head over the plate and by negating the posterior pelvis tilt associated with spinal lordosis, could result in a straighter back (for this position, an anterior trunk support could be beneficial). Unfortunately few wheelchairs offer this facility.

Out of a wheelchair

So the next best option is to transfer the person to an appropriately shaped normal dining chair which will give sufficient posterior and lateral support, while allowing the feet to move back and the head forward. How to get the seated person to the table smoothly and without putting the carer at any risk? A great solution is the MillieMova – a simple device that can be attached to a standard dining room chair that, when you put your foot on a lever at the back it, temporarily engages a set of wheels that allows the chair to be pushed into the table (Fig. 1). The chair settles back down on its feet when the lever is released, and then at the end of the meal the wheels can be re-engaged to roll the chair away from the table. Savings on back strain, and maintained dignity all round!



Figure 1. Millie is able to move her grandfather towards and away from the dining room table with little effort.

For children, it is important that their seating is at the correct height for the table they are sitting at. Often this can vary from sitting at the normal table with adults, to sitting at lower height tables, especially in schools, etc. The next challenge is that as a child grows the distance needed for the seat's position relative to the table top changes.

Adjustability

To cope with this, here are seating systems derived from the original Scandinavian Tripp Trapp chair, where the seat panel can be moved up and down between different slots in the chair legs. The Breezi was the first of these, where the foot print was extended for greater stability, different widths offered, and various accessories made available to cover the needs of children with behavioural challenges and mild disabilities (Fig. 2). When choosing the height of the seat plate, consideration needs to be made for the space for the thighs under the table, and more importantly, the distance between the table top and the chin, to enable a good posture while eating. In addition there needs to be sufficient space for the forearms to be able to rest comfortably on the table and then raise the hands to mouth level.



Figure 2. The Breezi chair with height adjustable seat plate and foot supports

The positioning of any arm supports on the chair can become important if they prevent the chair from being moved far enough forward under the table (Fig. 3) – solutions include removable or adjustable height arm supports, or shortened lengths so that they are more just elbow than full forearm supports.



Figure 3.

More complex needs

Where an individual, due to physical challenges arising from the likes of muscle weakness or poor motor control, is unable to feed themselves and need to be fed, it is essential to ensure that the head is placed into the optimum position – e.g. if pushed too far back this opens up the trachea and risks food entering airways rather than the digestive system, and thence choking.

Too far back and this also impairs the swallow reflexes, which may be impaired already, anyway. These feeding challenges are often passed into the care of speech therapists. These professionals have found Stealth's i2i head support system to be a good solution for helping the individual to get their head into the best position for eating and swallowing. (There is an excellent film demonstrating this, which is available on YouTube².)

References

1. BS 8625:2019, *Selection, placement and fixation of flexible postural support devices in seating – Specification*
2. <https://youtu.be/3ozdphoB4nk>



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