

# aalborg

FURNITURE • FORM • FUNCTION

Danish inspiration...  
British design and manufacture



Aalborg is a business that is completely devoted to providing an understanding of issues relating to education and the workplace, developing solutions for a fast moving world.

Its origins began as Anthony Hill Designs Ltd in 1966, which traded as Stage Systems until being sold to Havelock Europa plc in 2007.

The Company was formed by Anthony and Jayne Hill, who retain a passion for raising the standards of both education and the school environment.

The Aalborg brand is being developed to also include auditorium, healthcare and office furniture with a focus on the wellbeing of the user and especially the postural benefits.

It follows decades of inspirational research by Dr Chresten Mandal and Professor Nigel Corlett.





Aalborg, which took its name to signify products designed and made in Britain with essential Danish inspiration, is concentrating on both market and design issues, with a generalist outlook rather than a specific one.

The Aalborg range includes its stage, chair, desk, saddle, workstation, refectory unit and modular floors.

All were conceived from research by experts that included the likes of engineers, industrial designers, ergonomists and surgeon, with the work leading to the creation of products that not only benefit the people using them but also the establishments in which they are employed.

Chairs are sophisticated, to be used in a wide range of environments. With an alert and upright posture, these chairs enhance concentration and energy levels.

Available in a number of styles and heights, three sizes make it suitable for all heights without adjustment. In addition, they allow for compact storage of up to 20 high on trolleys.

The desks produced by Aalborg have tilt adjustment to aid reading and writing, along with a footrest that helps both large and smaller users.

There is no need for height adjustment when using the Aalborg chair or saddle.

The desk has a number of features including a replaceable writing surface and an under desk bag hook that reduces clutter on the floor.

Desks can be queued to store compactly and also provided with a range of surfaces that will suit musicians, artists, architects, and many more.

Customers for these comprise of hospitals, shops and offices.

Aalborg's saddle is used to give healthy, alert and comfortable posture. Unlike alternative designs, the Company's is injection moulded as a single component for simplicity, durability and low cost.

The workstations help to create a versatile and comfortable classroom, which go perfectly with the unique saddle to form a work 'pod'. Workstations are available with and without wheels.

The Company supplies tip n store tables, which are perfect for the refectory and can be wheeled into position, making storage effortless and quick, and Aalborg also produces modular stages at great value that can be used for drama teaching, performances and exhibitions.

Customers can benefit from flat, split-level and tiered layouts for audience or choral use, all of which can be achieved quickly and easily.

These can also be stored in spaces that are much smaller than those in which they are used.

What is unique about the stage is it is simple to construct and is manageable enough to be built by children of primary age, while complying with the highest standards.

For larger, higher concert stages or for spectator seating indoors or out, laminated panels of 1500mm x 900mm are available, flat, silent and lightweight using the same components fixed to scaffold legs and understructure.

Aalborg offers two stages in one, with no mismatching or need for different structures or stage types, with all components providing easy one man handling.

The newest products of the Aalborg range are the modular display and dance floor, which uses light panels, is quick to lay and like many of the Company's products, is compact to store.

Display floors are perfect for exhibitions, product presentation and retail displays, while the dance floors are popular in pubs, function rooms, clubs, and hotels.

Both of these products are available in a limitless range of standard and bespoke finishes to match different environments or specifications.

The Company is aware that many people spend a significant part of their lives sat in office environments and therefore, the furniture provided will improve the posture of those using them.

All products comply with international standards and are available for high volume production in the UK.

The huge investment in quality design seems to be paying off, as recent customers in the UK include primary schools from all over the country, a large village hall and several major orders from Centre Stage Engineering and Drama by Design for stages and seating; Kent County Supplies, Yorkshire schools, London Boroughs for School furniture, which includes repeat orders of the tip n store dining tables.

Constantly looking to expand, the Company has recently appointed Contrax Furniture in Florida and Paragon in Texas as prime agents in the USA.

In Canada, Mitybilt has re-ordered a large number of saddle stools and agents in South Korea and Japan will shortly come on line with exhibitions to promote Aalborg's equipment.



# Posture affects our health!

Increasing numbers of even small children suffer from back pain and back pain has become extremely worrying, sometimes leading to a life-long disability. In extremes, this can develop into kyphosis where the discs have so much pressure on the forward edges that they prolapse, needing horrible surgery to correct.

Over 60% of workplace absenteeism is due to back pain, most commonly NOT from labourers or farmers, but from them having sedentary jobs, sometimes when sitting on costly chairs, frequently not set up as they should be, and used with desks that are far too low, causing the rounded back syndrome and back, shoulder and neck strain.

Bad seated posture is the direct result of chair designers failing to understand how our bodies are constructed. Most often, chairs require the seated occupant to sit in a 90/90 degree posture (see diagram below) the direct consequence of anthropometric data diagrams, intended to only provide body dimensions, being interpreted as the way we should

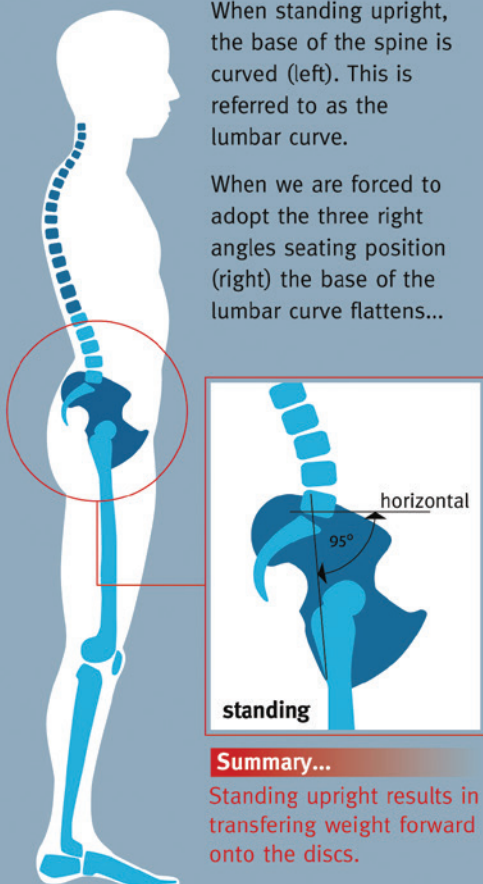
sit. Our hips, however, only flex around 60 degrees and if a 90 degree posture is used, then the lower three vertebrae need to share the other 30 degrees, or more if, as is frequently the case, the sitter slumps further.

Sixty years ago the lack of TV, computers, laptops and over indulgent car driving parents, meant the older of us mostly led a healthy lifestyle. The lightweight school chair and table.....not 'desk' but 'table', with no slope and both much lower than previously, lighter, stackable and much less expensive than pre war. 'Cheap' is the word we have come to use, and so far as England has been concerned, the cheaper the better!

## Standing

When standing upright, the base of the spine is curved (left). This is referred to as the lumbar curve.

When we are forced to adopt the three right angles seating position (right) the base of the lumbar curve flattens...

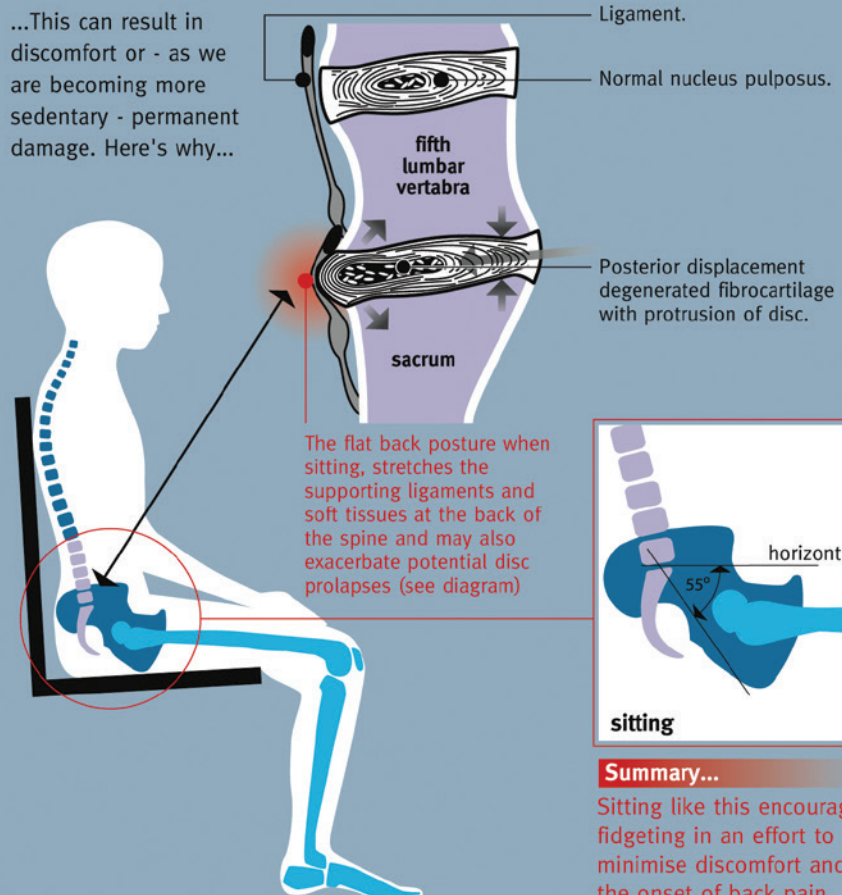


### Summary...

Standing upright results in transferring weight forward onto the discs.

## Right angle sitting position

...This can result in discomfort or - as we are becoming more sedentary - permanent damage. Here's why...



The flat back posture when sitting, stretches the supporting ligaments and soft tissues at the back of the spine and may also exacerbate potential disc prolapses (see diagram)

### Summary...

Sitting like this encourages fidgeting in an effort to minimise discomfort and the onset of back pain

So the word 'comfy' developed use, usually meaning slumped on an all too soft sofa or arm chair. But comfy begat lazy and lazy begat eating in front of the telly, doing increasingly less and watching TV for too many hours, staying up late, watching in bed. The consequence has been fatter and increasingly obese children.

Unless one was born with some disability, sixty or more years ago one rarely heard the word 'posture', unless it had to do with standing to attention in the CCF at school. We all walked or cycled to school, played loads of sport, fine weather or foul, climbed trees and threw stones (boys at least!).

School furniture mostly comprised of very heavy seat and desk combined units with a narrow tip-up seat plank, usually higher than regular chairs, and sloping desks with lift-up surfaces, a groove for pencils plus an inkwell.

Despite hard seats, pupils sat upright, and the sloping desk surface, bringing the reading/writing surface closer to the eyes, disallowed a slumping posture (kyphosis). Primary school children have a much closer field of vision than adults so this can help improve both reading and handwriting. (see crouched current posture verses that with a good posture chair/desk, diagram below.)

Adults in the 21st century now increasingly have a sedentary occupation and sitting at around 450mm, especially in an open plan area when getting up to fetch and store files or discuss matters with others, takes up more energy than sitting at 550-600mm as shown.

Despite the huge cost of 'executive' desks and chairs, British and most EU office standards have not changed in decades despite the steadily increased heights (and both widths and weights!) of adults.

Recently, FIRA 'discovered' that 90% of men were unable to fit their legs under standard desks whose standard height needed to be raised! All of this is hardly either 'new' or surprising. The steady increases in height and the different sizes of ethnic communities was recognised by Scandinavian ergonomists over sixty years ago and Swedish police were issued with height adjustable desks in the 1950s. Today, it's extremely rare to visit a Danish office and not see desks simply height adjusted by mechanical or mostly electrical means, and chairs which can match a range of sit/stand desk heights are employed. Staff are encouraged to vary their posture and ways of working too. Pre-war Winston Churchill and many managers preferred to either stand or use a high stool and in the 1960s, Herman Miller marketed

a range of such, with stools rather like a wide Brooks bicycle saddle, much liked by both designers and architects.

So what's all this posture stuff got to do with health, our concentration at school or at work.....or indeed the National economy? A very great deal! Discomfort, physical pain, lack of exercise and a poor diet, often combined with the stress of modern lifestyles, all contribute to disability, poor attitudes to working and achievement. A situation contributing to an unhealthy population needing Doctors' and often hospital time at growing cost.

So where do we begin? It may seem strange to say it but without doubt, the best sitting posture is obtained on horseback. The hip joints are in the resting position with a bend of 45 degrees, the hip joints and the spine are not loaded in an extreme way and a perfect balance position is achieved and maintained. In addition, the saddle slopes downwards, so your spine takes up the right position to acknowledge the needs of the lumbar curve. Sitting upon a horse requires you to get your body into balance - but comfortably so. Interestingly, horse riding is sometimes used in the treatment of back pain.

Try convincing a rider that it would be more comfortable and practical to sit in the 'three right angles' position - to 'sit up straight' as we demand of our school children. Imagine the awkwardness, impracticality and discomfort.

How interesting then that potters, piano players and people like textile weavers often use forward-sloping seats to give them both the perfect 'in balance' sitting position and the freedom to move as they need.

Interesting too that architects, illustrators and designers recognise the importance of a sloped surface on which to write, draw and read. Having your work surface sloped from back to front brings your eye and hand into much more natural, direct and comfortable contact with the work you're doing. So there are some indisputable clues here about an ideal seated working position - forward sloping seat, sloped working surface, legs at 45 degrees.

As we grow older and usually less energetic, we generally want to sit for longer periods and this at a time when good support and posture is increasingly important, not only for comfort, but to relieve pain and frequently to be 'off our feet'. But once seated in the average armchair, which might be both too low and 'soggy', it may be difficult to get back up. The answer is a higher chair with good support and firm armrests to help rising.

### Poor posture...

Strained neck and a hunched back which creates pressure on the base of the spine



### Better posture...

Desk height still creates neck strain but raised seat creates a more open posture



### Perfect posture...

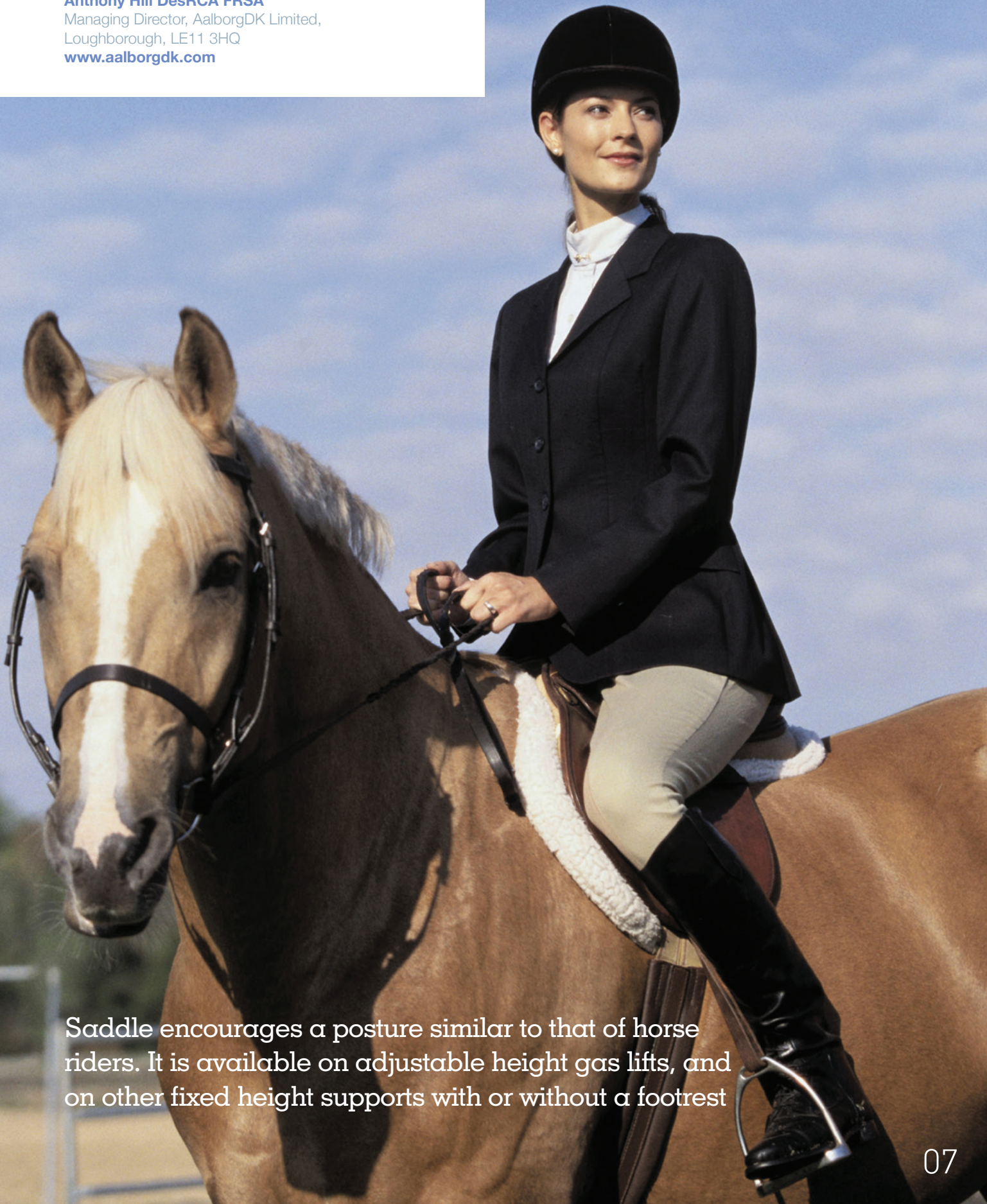
Aalborg's furniture is higher and includes features which create a healthy posture



All these things we both see and are aware of. So why on earth are furniture and interior designers so unaware, so disobliging that their customers suffer? One keeps hearing how attractive furniture is, we chose our equipment on sight, but if it causes or prolongs the damage we sustained at school, isn't it about time we began to understand.

**Anthony Hill DesRCA FRSA**

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Saddle encourages a posture similar to that of horse riders. It is available on adjustable height gas lifts, and on other fixed height supports with or without a footrest

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For further information on the principles behind Aalborg equipment, and for up to date news on the current range and how it is constantly developing please visit...

**[www.aalborgdk.com](http://www.aalborgdk.com)**

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