

CASE STUDY

Nº 16

Name: Eamon Hohn
Age: 11
Occupation: School student
Location: Cairns, Queensland, Australia

Symptoms

Spastic quadriplegia cerebral palsy.

Eamon's condition is moderate to severe. He has some spasticity with increased extensor tone. There is a tendency for his pelvis and trunk to rotate obliquely with a drop to the left side, which tends to make him slide off a conventional seat. Eamon experiences some restriction in the activities he would like to undertake but determinedly states that he is normal and that his biggest problem as 'other peoples' attitudes'.

Introduction to the Bambach Saddle Seat

Eamon was told about the Bambach Saddle Seat by the occupational therapist who treats him. When his mother saw how Eamon's posture improved when sitting on the Bambach Saddle Seat, she encouraged him to use it. Mrs Hohn had some reservations about back-up service and the ability of the seat to be modified to fit the special physical and

environmental needs of each child.

Reassured that the seat is fully supported, with readily available service and parts, she purchased a seat for Eamon. The occupational therapist used her knowledge of the seat and the video provided by the manufacturer to educate Eamon about its use and adjustment. Eamon uses a reduced abduction seat with a sheepskin cover, 3 locking and 2 standard castors, and an 80 mm drop-through stem.

Result

The Bambach Saddle Seat anchors Eamon's pelvis, allowing him to assume and hold a correct, upright posture. It prevents him from sliding forward and twisting obliquely, so he no longer slumps forward and to the left. The Bambach Saddle Seat offers a firm symmetrical posture with a clear and easily maintained midline. The position of abduction and extension of the hips helps to break down adductor spasm. This posture allows Eamon to sit for functional tasks with better performance of such skills as



Eamon (third child from the right) is using the corrective seat made for him. Even in this specially designed seat his spine is not upright with its natural curves. Functional tasks are more difficult and his muscles are not balanced. If he were using the standard seating provided by schools he would be much worse off.

Eamon on his Bambach Saddle Seat, posture now upright, showing improved functional ability, with a better relationship to his work and looking and feeling more 'normal'. Note the reduction of strain in his sternocleidomastoid.

Continued from overleaf

writing and computer use. Eamon's head and neck are in a more normal position in the Bambach Saddle Seat. Apart from a dramatic improvement in posture and the resulting functional improvements, Eamon likes the seat

because it allows him to look more 'normal'. ☺

The Award-winning Bambach Saddle Seat



Mary Gale

The idea for the Bambach Saddle Seat came to occupational therapist and horsewoman Mary Gale in treating patients who could not sit unsupported on an ordinary seat or wheelchair. Mary found that the same patients could balance quite independently on horseback and assume a symmetrical posture.

It occurred to Mary that if she could replicate the 'saddle position', where the spine is able to assume its natural curves, she would create an ideal seat for therapy as well as for task seating.

A review of literature showed work of Dr A.C. Mandel, who noted that the ideal sitting posture for the human spine is achieved on horseback. Other researchers also concluded that ordinary furniture removes the natural curves from the spine and places great stress on the spinal discs. Anecdotal reports from horse riders who suffered severe back pain on the ground, yet who gained marked relief when mounted in the saddle, were also noted.

Several years of experimentation resulted in the Bambach Saddle Seat, deceptively simple in design but incorporating refinements and features that permit sitting for extended periods without loss of a healthy spinal curve. The proof is that the Bambach Saddle Seat is enabling many people who suffer disabling back pain to return to work. The seat also offers the opportunity for normal adults and children to sit to work independently in correct posture and maintaining mobility, but it is especially valuable for many who are physically impaired.



NeoCon Silver Award
Design Excellence for
Desk/Workstation Task Chairs



Winner ADEX Award
for Ergonomic Task Seating

Published papers on the Bambach Saddle Seat

T. Verkindere, C. Lacombe, and J. P. Lodter, 'Electromyographic study of the dynamic sitting position suitable for dentists', *L'information Dentaire*, Vol. 80 No. 12 (March 1998)

M. Gale, S. Feather, S. Jensen, G. Coster., 'A Multi Disciplinary Approach to the Design of a Work Seat to Preserve Lumbar Lordosis'. *Australian Occupational Therapy Journal*, Vol. 36 No. 2 (June 1989)

Publication

Mary Gale, *The Seated Spine & The Bambach Saddle Seat*, Brookvale, NSW, 1997.

Research papers on the Bambach Saddle Seat have been presented at:

International Conference on Ergonomics Occupational Safety & Health & the Environment, Beijing, October 1988.

Third International Physiotherapy Congress, Hong Kong June, 1990.

The National Safety Council of Australia's Congress, 'Futuresafe', Adelaide, South Australia, May 1992.

'Tadsem', Cumberland College of Health Sciences, University of Sydney Campus, Australia, October 1992.

World Federation of Occupational Therapists Conference – The Scientific Programme Technology Seating Sessions, Imperial College, London, April 1994.

Research on the Bambach Saddle Seat has been exhibited via poster presentation at:

The World Federation of Occupational Therapists, Melbourne, Victoria, Australia, April 1990.

World Physiotherapy Congress, London, UK, September, 1990.

Unpublished papers on the Bambach Saddle Seat

A. Nicholls, Doctor of Chiropractic: 'Report; Physiological Evaluation of the Intact Column-Pelvis-Meningeal System Radiographic Outcome Findings'.

Prof. G. Schumpe, Graduate Physicist/Medical Practitioner: 'Biomechanical Study of Sitting on the 'Saddle Seat'.

M. Gale, S. Aldrich, S. Jensen, W. Gale, 'Comparison Study of a Saddle Seat with Conventional Office Work Seat'.



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