

CASE STUDY

N° 21

Name: **Blaire Browne**
Age:
Occupation: **Embalmer**
Location: **New Zealand**

Symptoms

Blair had a bad fall several years ago when he was working as a Fireman. While wearing breathing apparatus he slipped and fell down some concrete steps, the oxygen cylinders fell against and into his back. At the time Blair sustained heavy bruising and was off work for a few days. His back became increasingly painful and 3 years after his fall was so bad it was suggested he retire from the Fire Service. Which he did, and retrained as an Embalmer.

The original injury was to L4 but as time passed L3 and L5 became affected. Basically there is now a prolapse, severe disc degeneration and osteophytes on the spine. He had to have a lifestyle change. No bending, twisting, heavy lifting. He spent the last 18 months with intensive physiotherapy pool work. Also many visits to his Occupational Therapist (at one time 3 x a week). He did not want a sedentary job and retrained as an Embalmer.

New job problem areas were with lifting caskets and especially being on his feet for 6-8 hours in a tilted forward position working on bodies. This was torture if the table was a fixed height. So an adjustable table has been installed and a mortuary hoist installed. These modifications to the work environment while good did not do enough.

Introduction to the Saddle Seat

Blaire first tried a Bambach Saddle Seat about 18 months ago. It was in the Occupational Therapist's rooms where he went for an assessment. At this stage he was going to the Occupational Therapist frequently and always sat by choice, in this seat, because it was the most comfortable. So his Occupational Therapist suggested he try one for work.

Blaire has the black vinyl with back and tall gas lift model. He says this is the fastest Chair on the floor. He would rather sit in this Seat than any other, even when having a break. It is used to have a break, when using the computer and now has to fight co-workers for the Seat. It did take a couple of weeks to get used to it although there was no troubles with the abductors (this customer is/has been a very fit person).

Result

When working around the head area stitching, putting on make up, he can now sit to work on The Bambach Saddle Seat. When trimming caskets it takes the weight off the feet and puts him in a better position. Work is now relaxing and although he can now take his time, he says more gets done.

Prior to getting a Bambach saddle Seat, trimming one casket was a problem, now he can do six at a time



Above and right: Blair had to change occupations after damaging his back as a fireman. Having re-trained as an Embalmer he still needed to make many adjustments to keep away from pain. The creative conventional seating he found himself in just did not help.

Above and right: The position of Blair on The Bambach Saddle Seat shows a vast improvement of posture in contrast to conventional seating. The ability to use his hands with greater freedom and accuracy is also improved.

Continued from overleaf

sitting and there are no problems. His back is more comfortable and he can now work longer hours or work the same length of time and not need to take as many breaks. He doesn't feel as tired at the end of the day and the nagging back pain is not as exaggerated.

Blaire felt he received good operating instructions. The seat was taken out to him and demonstrated. Written instructions also left. Plus, he would have received some instruction from the

Occupational Therapist while originally sitting in the Seat. It did take a bit of getting used to, it was different and took a while to get the best from the Seat. However, now he "zips around".

The Bambach Saddle Seat has made working more tolerable. When not using the Bambach Saddle Seat and his back was bad he got grumpy, now there is no pain, can cope easier when feeling fine physically – with the job, and is not tired and tense at the end of the day.

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, Oct. 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'.

M. Gale & D. Michael, 2000 'The Theory of Ergonomics of Task Seating for Children' paper presented at Early Intervention Australia - 4th National Conference Brisbane, Queensland, Australia, (July 2000)

Holloway R.E. & Thackray, 2001 'A Comparison of Trunk Muscle Activity While Sitting on a Conventional Seat and on a Saddle Seat' Paper presented at the Physiotherapy Research Society, University of Ulster, Belfast 2001

B. Housten & D. Michael, 2001 'Evaluating the use of The Bambach Saddle Seat to Enhance Functional Outcomes in a Disabled Client Group' Presented at the 37th Annual Conference of the Ergonomic Society of Australia 2001. Published 2001 Ergonomic Society of Australia

M. Gale, 'An Opinion on The Theory of Ergonomic Task Seating Vs The Facts', 2003

