CASE STUDY

Nº 10

Name: Ruth Rennick

Age: 30's

Occupation: Housewife; part-time postal officer

Location: North Albury, NSW, Australia

Symptoms

Trauma to her right leg due to a motorbike accident in 1995 resulted in an above-knee amputation for Ruth. With a continuing series of unsatisfactory prostheses, Ruth was only mobile using two crutches. Standing for any length of time was impossible; carrying anything, or moving things around the house, was a logistical exercise. All her usual tasks in caring for a husband and three school children, as well as returning to work, were difficult or impossible.

Introduction to the Bambach Saddle Seat

As part of her return to work rehabilitation program, Ruth was offered a range of work stools. Only one was successful – the Bambach Saddle Seat supplied on loan from the Commonwealth Rehabilitation Service by an occupational therapist.

Result

Using the Bambach Saddle Seat, Ruth could work, as she could now get close to the counter. But her family life was so difficult she left work and took the Saddle Seat home, where it made a great difference. Ruth now has independence and mobility around the kitchen. She can prepare meals, move items around the kitchen and onto the table without having to ask for help. Even removing a roast from the oven is quite safe using the Bambach Saddle Seat.

The resulting independence is extremely important to Ruth. She has a prosthesis, and even though this is quite satisfactorily fitted, it is a relief to remove it at times, or to get a few things done before putting it on. When Ruth was in Sydney for the fitting of a new limb, she was so lost without the Bambach Saddle Seat that she hired one from the company for her six week stay.

A further benefit for Ruth is the fact that, when sitting on the Bambach Saddle Seat, her stump is not in 90º continuous flexion as it is in a wheelchair or conventional seat. This prevents the flexion contraction, which can often prevent successful use of a prosthesis.

Ruth using crutches, attempting to perform kitchen tasks. It is obviously very difficult, with a high casualty rate for plates and a high stress level for Ruth and her family. Cooking this way was dangerous as well as extremely difficult.

Ruth, using the Bambach Saddle Seat, has good mobility and freedom to use her arms and hands. Her one foot and leg propel her about. She is very safe and stable; her stump is not flexed as it would be in a flat seat or wheelchair. She can cook, carry, clean up, be her own kitchen hand and entertain with relaxation.

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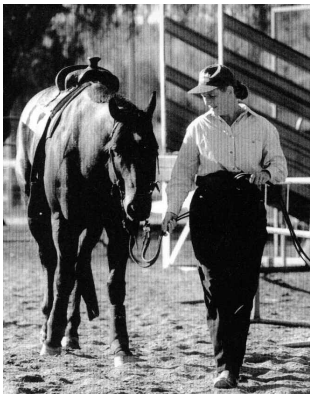
The Award-winning Bambach Saddle Seat



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'.

THE BAMBACH SADDLE SEAT™

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