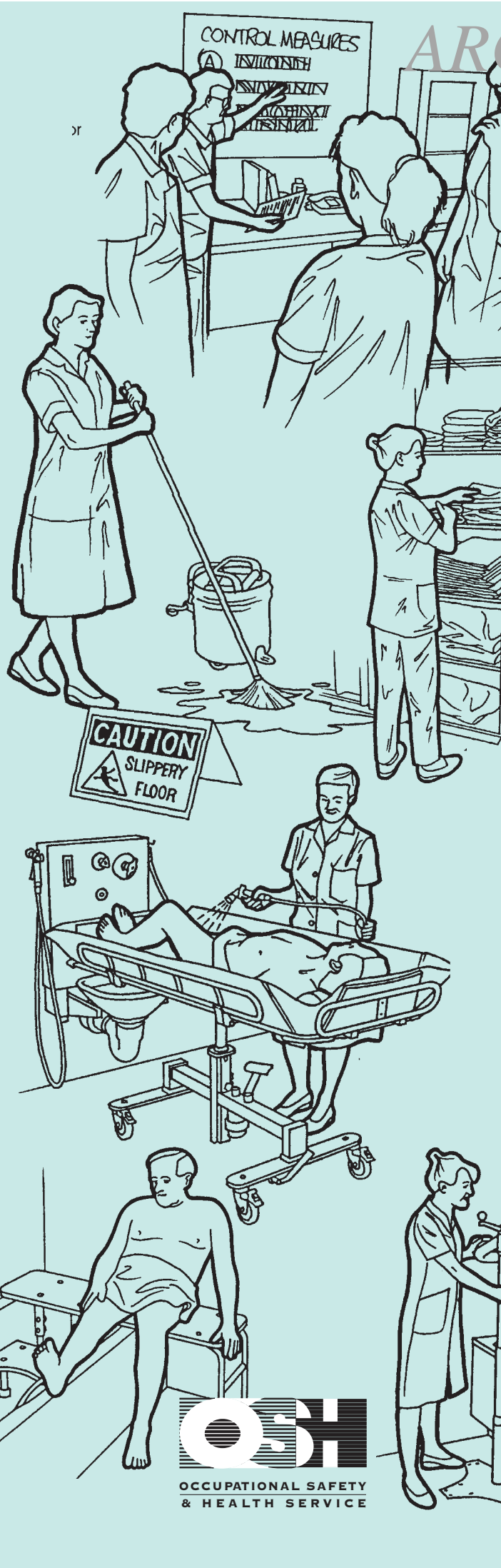


# BACK in CARE

## Preventing back pain and back injuries in caregivers

*“The adult human form is an awkward burden to lift or carry. Weighing up to 100 kg or more, it has no handles, it is not rigid, and it is liable to severe damage if mishandled or dropped. In bed a patient is placed inconveniently for lifting, and the placing of such a load in such a situation would be tolerated by few industrial workers.”*

**These words, taken from a leading article in *The Lancet* in 1965, summarise the challenge this pamphlet addresses.**



## How bad is the backs problem in New Zealand caregivers?

Many caregivers in hospitals and residential care facilities have had a back injury or have experienced chronic back pain. This group is typically paid 3.2 percent of all money spent on back injuries by ACC each year. Caregivers lead the field of all New Zealand occupational groupings in this respect.

## What needs to be done to reduce the back injuries and back pain of caregivers?

To prevent back injuries, hospitals and residential care facilities have traditionally relied on training employees *how to lift*. This strategy, while necessary, is not enough by itself. It must be accompanied by a reduction in the burden of manual handling.

To this end a united, team approach is necessary, in which employers and employees act together. This pamphlet outlines a four-step framework to reduce the risks of manual handling tasks:

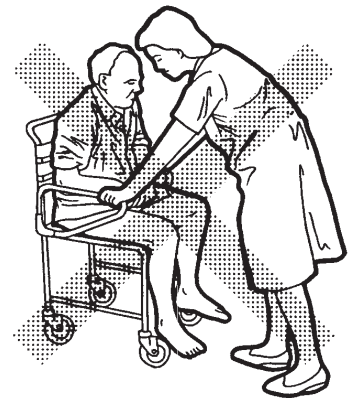
- **identify** manual handling hazards,
- **assess** the risks they pose,
- **control** the risks, and
- **evaluate** the measures taken until control is achieved.

patient and the need to handle in an emergency.

- A climate of denial or disbelief about the validity of back injuries.
- Nurses' and caregivers' perceptions that back injuries are inevitable.

There's more to nursing than handling people.

- Nurses and caregivers do not handle only people. Laundry bags, trolleys, shower chairs and beds also require handling. The improved design of plant

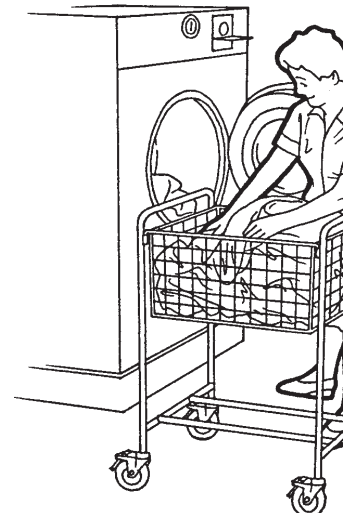
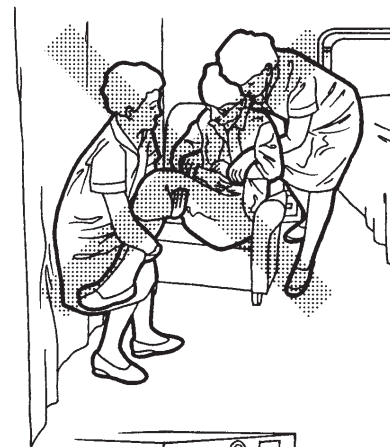


## Why do back injuries occur?

The checklist in this pamphlet gives the full range of risk factors for back injury. The most important ones for nursing are:

- The spine is the base of movement and support. It is in constant use.
- Modern society has led to reduced levels of effort for many, but requires that some groups must use their backs beyond a reasonable limit.
- Back injuries are cumulative.
- The need for constant handling and prolonged stooping.
- The poor design of facilities and equipment.

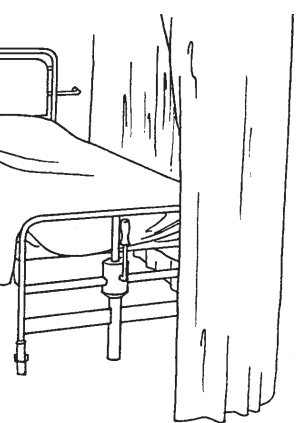
- The tradition that nurses and caregivers cope and carry on regardless.
- Shortages of staff. More work for fewer people in the present economic climate.
- The extremely awkward nature of the loads handled: patients who are wet, fragile, apprehensive and possibly unco-operative; the obese



and equipment, storage spaces and so on will go a long way towards reducing the overall burden. This can only reduce the strain on backs and lead to a reduction in injuries.

## A new control strategy is needed

Training caregivers how to lift cannot, by itself, address many of the fundamental problems of handling illustrated opposite. Other measures are needed to



supplement this traditional approach.

The Health and Safety in Employment Act 1992 suggests the following approach:

- 1 Use a systematic approach to the identification, assessment and control of manual handling hazards.
- 2 Design and redesign equipment and workstations on ergonomic lines.
- 3 Provide training for all in the organisation.

Figure 1 below shows several ways of identifying manual handling hazards. For example, tasks can be studied with the aid of the checklist at right. This will give clues on how the severity of a task can be reduced. As you will see, there are many possible risks. The two registers reproduced here show two other ways to collect data.

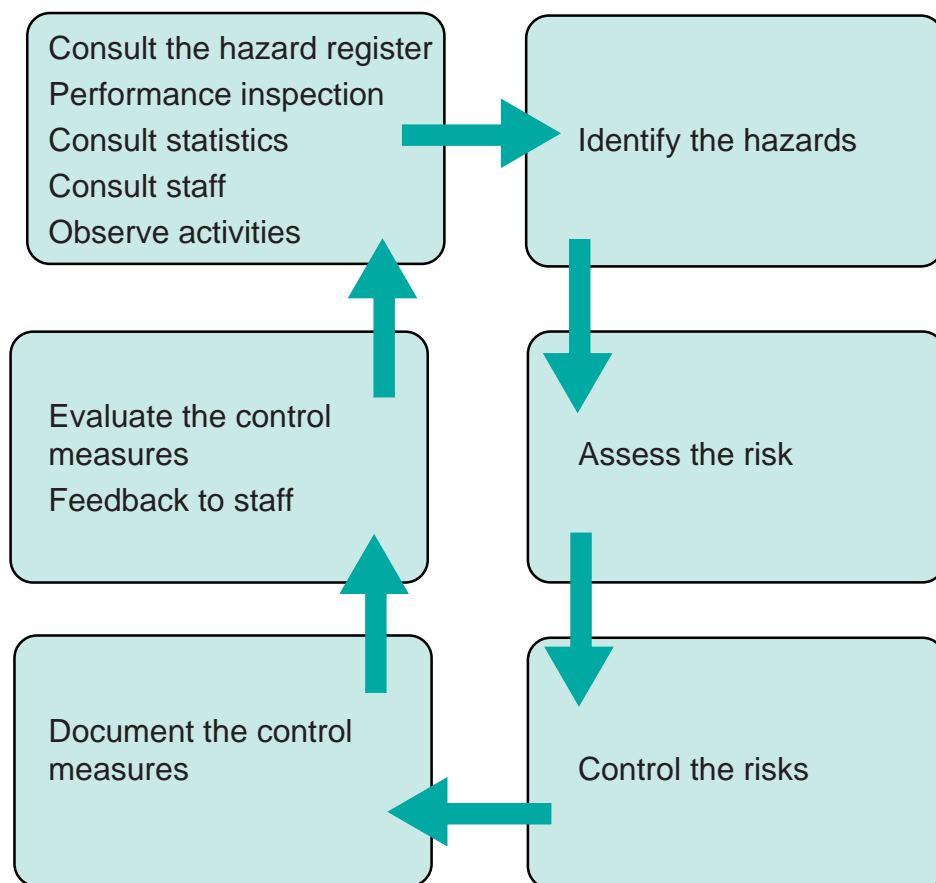
Once a manual handling hazard has been identified, the risk it poses needs to be assessed.

Control options for manual handling risks are illustrated later on. The main options for control (with some examples) are:

- Redesign the job.
- Make the object lighter, e.g. use smaller laundry bags.
- Get storage levels right: store heavy objects at waist height.
- Reschedule the bathing of patients throughout the day.

This basic procedure is amplified in the OSH publication *Manual Handling Guidelines for the Workplace*.

Figure 1: The Solution of Manual Handling Problems



## Manual Handling Hazard Identification Checklist

**1** What is the task being assessed?

**Movement, Posture and Layout**

**2** Is there frequent or prolonged bending down where the hands pass below mid-thigh height?

Yes  No

**3** Is there frequent/prolonged reaching above shoulder?

Yes  No

**4** Is there frequent/prolonged bending/reaching forward?

Yes  No

**5** Is there frequent or prolonged twisting of the back?

Yes  No

**6** Are awkward postures (ones that are not forward facing and upright) held frequently or for prolonged periods?

Yes  No

**Task and Object**

**7** Is manual handling performed frequently or for extended periods?

Yes  No

**8** Are loads moved or carried over long distances?

Yes  No

**9** Is the weight of the object:  
 More than 4.5 kg. and handled from a seated position?  
 More than 16 kg. and handled in a standing position?  
 More than 55 kg?

	Yes	No
More than 4.5 kg. and handled from a seated position?		
More than 16 kg. and handled in a standing position?		
More than 55 kg?		

**10** Are large pushing or pulling forces involved (where pushing, pulling or other force application is required).

Yes  No

**11** Is the load difficult or awkward to handle? (For example, due to its size, shape, temperature, texture, instability, unpredictability or lack of handles).

Yes  No

**12** Is it difficult or unsafe to get a good grip on the load?

Yes  No

**Work Environment**

**13** Is the task performed in a confined space?

Yes  No

**14** Is the lighting inadequate for safe manual handling?

Yes  No

**15** Is the climate particularly cold or hot?

Yes  No

**16** Are the floor working surfaces cluttered, uneven, slippery or otherwise unsafe?

Yes  No

**Individual Factors**

**17** Is the employee new to the task or returning from an extended period away from work?

Yes  No

**18** Are there age-related factors, disabilities or other special factors that may affect task performance?

Yes  No

**19** Does the employee's clothing or personal protective equipment interfere with manual handling performance?

Yes  No



### Evidence that this approach works

The following are three examples of hospitals where the approach outlined in this pamphlet has been put into practice:

#### MATER HOSPITALS, BRISBANE

In the Mater Hospitals campaign in Brisbane, Australia, a manual handling campaign was mounted. There was a resulting decrease in injury rates.

The lost time associated with back pain was reduced from 600 shifts per year to 500. On average, lost time was reduced from 17 working days per claim to 11.

Reductions in compensation payments led to a reduction in insurance premiums of A\$105,000 in

the first year of the programme and A\$177,000 at the end of the second year of the programme.

Morale of the staff improved as a result. Eighty-five changes were made to plant and equipment as a direct result of co-ordinated prevention programmes. Some of these were made throughout the entire hospital group, such as the establishment of a preventive maintenance programme for all mobile equipment.

The majority of improvements were technically simple and inexpensive. Nurses reported feeling more comfortable as a result of these changes.

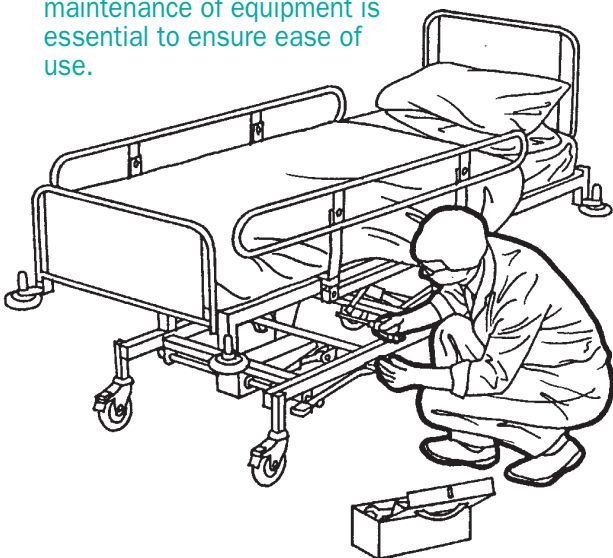
In Taranaki Base Hospital, all beds have been numbered and recorded on a computer database, as part of an initial phase of a comprehensive campaign. The database is in the maintenance section. When a bed needs repair, maintenance staff consult the database to find out what tools and spare parts they may need before setting out. The beds are kept in better condition and this has contributed to a decreased incidence of back and shoulder injuries among nurses.

#### HAVENCARE HOSPITAL GROUP

The HavenCare Hospital Group, Auckland, has mounted a campaign involving the reduction of the handling required, not just training how to lift, and has seen a reduction in both injury rates and ACC payouts.

### Some controls for manual handling tasks

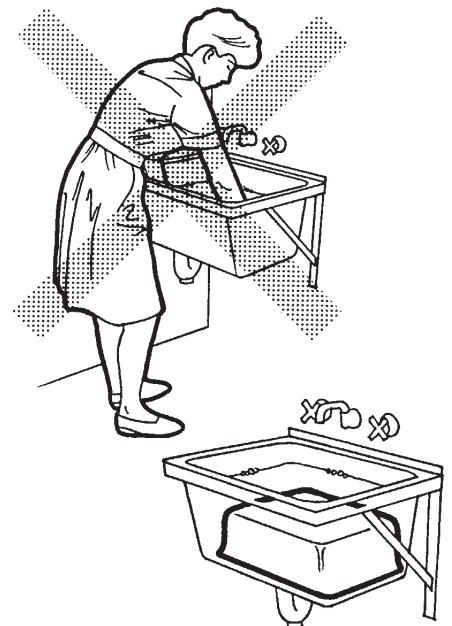
Regular repair and maintenance of equipment is essential to ensure ease of use.



Slips and falls can contribute to back injury. There are several ways to reduce the hazard of slippery floors.



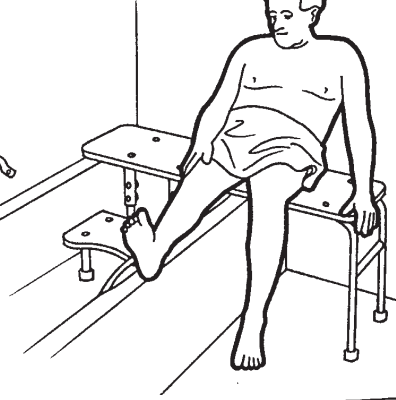
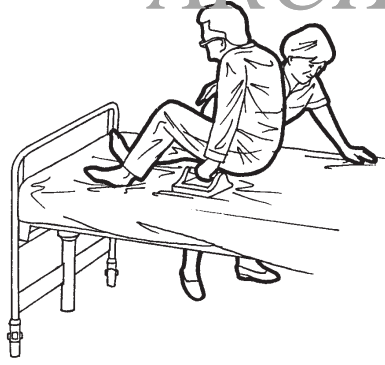
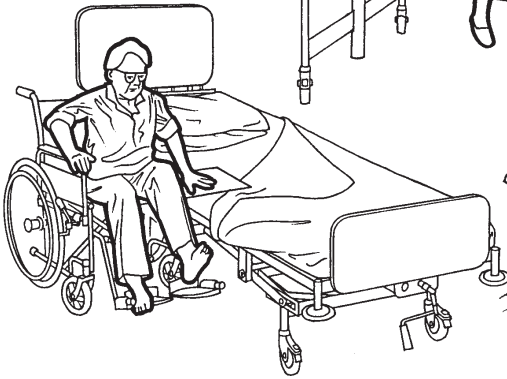
Deep sinks result in excessive bending.



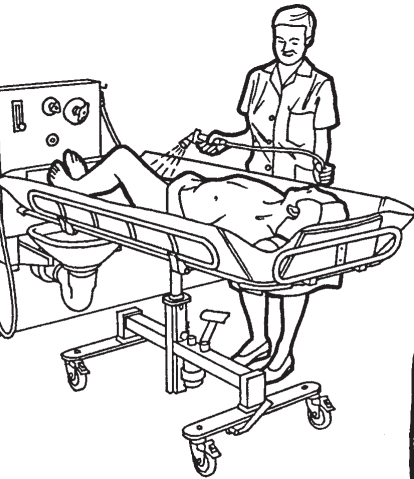
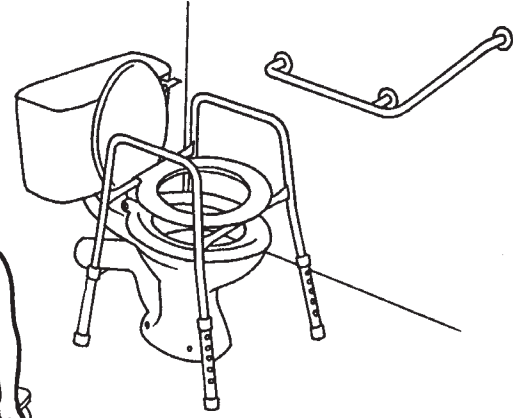
Raise the work height by using an upturned bowl or false bottom in the sink.

## Are patient handling aids available and used?

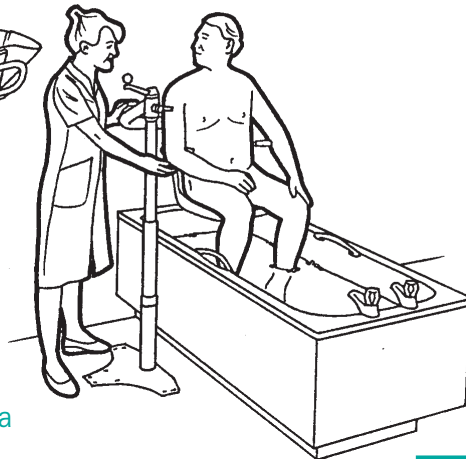
Some aids help residents to transfer themselves independently or with minimal assistance.



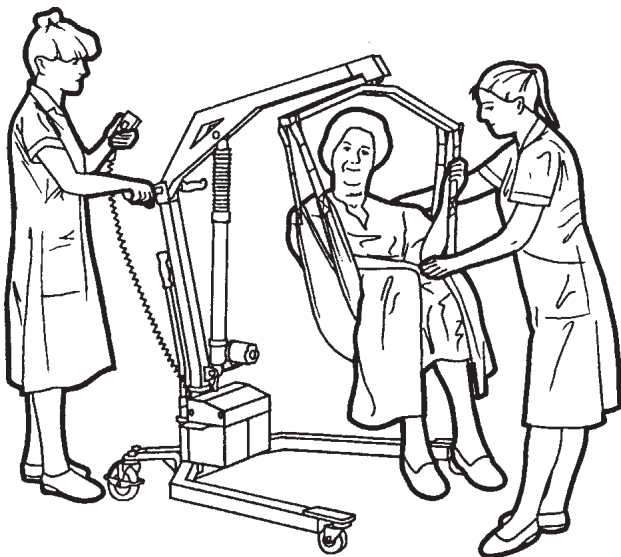
Provide grab rails, bath seats, toilet seat raisers to help residents to help themselves.



Get storage heights at the right level.



Use a mechanical hoist, a height-adjustable shower trolley or a height-adjustable bath to reduce the stooping involved.



Mechanical hoists are good for difficult or heavy transfers.

## Reducing the Risk: Work Organisation

Bed

Bed

Shower chair

Chair for breakfast

Lounge chair for breakfast

Shower chair

Lounge chair

Reorganise tasks to reduce the manual handling involved. For example, some residents sit out of bed to eat breakfast: if they are showered first, this reduces the number of transfers needed.

## What else can be done ?

### TRAINING

All staff in a health care facility need to know about the entire manual handling programme. Training packages need broadening to include hazard identification, risk assessment and risk control. Staff also need to know how to report back pain, manual handling incidents and injuries and other problems.

Training needs to be ongoing, as new staff move into a facility, as staff move from job to job, as skills need updating and as staff take different responsibilities. Trainers are encouraged to have a broad appreciation of all the issues of a manual handling campaign.

There are several challenges, of both principle and detail, which confront the person training others how to handle. These will need to be taken into account during the development of training programmes. Some of these challenges are:

- There is often no single best or correct way.
- Training to lift carries subtle messages:
  - managers and employees may think they have done enough;
  - it may undermine other measures.
- Different trainers train differently.
- The gap between training and starting a job.
- It may not address the task in enough detail.

### EXERCISE PROGRAMMES

Back fitness may be enhanced by exercises. Therefore, regular exercise has been advocated as a way of reducing back injuries. Some closely focused programmes of back assessment and exercise claim to have led to a reduction in injury rates, typically when instituted in a large company.

### CLOTHING

Clothing can restrict movement, make it difficult to retain modesty and require greater muscle force. Generally, a "separates" uniform, for example action-back shirts and divided skirts, will avoid these problems. Footwear also needs careful selection.

### PATIENT ASSESSMENT

All patient notes should have a section about handling requirements. This space should be large enough to contain all the needed information.

### INJURY MANAGEMENT

The manual handling policy should state the treatment and rehabilitation to be provided for staff who are injured at work. A well managed recovery is much preferable to the recurring injury likely when a return to work is forced.

## Further information:

The following publications are available from offices of the Occupational Safety and Health Service of the Department of Labour:

1 *Back in Care: Preventing musculoskeletal injuries in staff in hospitals and residential care facilities.*

(This pamphlet summarises the information in the above booklet)

2 *Manual Handling: Guidelines for the Workplace.*

3 *Occupational Overuse Syndrome: Checklists for the Evaluation of Work.*

Also recommended is:

4 *Safeguard* (bimonthly journal published by Colour Workshop Ltd., PO Box 34 355, Birkenhead, Auckland).

5 Lloyd P., Tarling C., Troup J.D.G. and Wright B. *The Handling of Patients: A Guide for Nurses.* The Back Pain Association and the Royal College of Nursing, London, 1987. 31-33 Park Road, Teddington, Middlesex, TW11 OAB.

#### Acknowledgement:

The illustrations in this pamphlet are reproduced from *Strategies to Reduce the Risk of Back Strain in Nursing Homes*, by kind permission of the Department of Occupational Health, Safety & Welfare of Western Australia.

#### Important Note:

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