

## NURSES AND PREVENTABLE BACK INJURIES

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Every single day in the United States, 9000 healthcare workers sustain a disabling injury while performing work-related tasks. Disabling back injury and back pain affect 38% of nursing staff.<sup>1</sup> In evaluating studies related to back injury, Owen<sup>2</sup> reported that “twelve percent of all nurses intending to leave nursing permanently cited back pain as either a main or contributing factor.” In the 1998 Bureau of Labor Statistics ranking of the professions at the highest risk for back injury, healthcare workers accounted for 6 of the top 10 positions. An obvious conclusion would be that these injuries are contributing, at least in part, to the current nursing shortage.

The consensus is that nurses are being injured primarily while transferring patients or when lifting patients, either by cumulative injury, by lifting over and over day after day (year after year), or by a direct injury such as lifting or transferring a 135-kg (300 lb) patient alone.<sup>3-6</sup> The National Institute of Occupational Safety and Health recommended a weight limit of 20.7 kg (46 lb) for women. This weight limitation was based on a box that was 35.6 cm (14 in) wide, with handles. The box was lifted for a total of 25.4 cm (10 in), beginning with it at knuckle height while the person lifting it was standing. This compact box with handles that weighs only 20.7 kg in no way resembles a patient, yet this limitation is the one recommended.

University of Ohio investigators<sup>3</sup> measured spinal load pressure biomechanically during various routine tasks related to handling patients: moving patients from wheelchair to bed or from bed to wheelchair and from commode to hospital chair or from hospital chair to commode. Various transfer techniques were evaluated on a 49.5-kg (110 lb) subject: 1-person hug, 2-person hook and toss, 2-person gait belt; and various

in-bed repositioning techniques: manual 2-person draw-sheet method, manual 2-person hook, and manual 2-person thigh-and-shoulder method. All of these movements are familiar to nurses. In the Ohio State University investigation, all the methods of transferring and repositioning that were studied placed the nurse in the high-risk group for back injury. In fact, “even the safest of tasks (of the tasks evaluated in this study) had significant risk.”<sup>3</sup> Take note that the “test subject” weighed only 49.5 kg and was alert, oriented, and cooperative—not an average patient. This study indicates that use of the proper body mechanics that we were all taught does very little to prevent cumulative or direct back injuries.

Can these injuries be prevented? The answer is a resounding yes. Several investigators have evaluated the usefulness of lift teams in an acute care setting. Charney<sup>4</sup> found that having lift teams who were responsible for all total body transfers and used proper mechanical lift equipment led to reduced rates of injury, fewer lost days, and fewer modifications of duty associated with lifting patients. At the end of a 1-year pilot study of a lift team, Meittunen et al<sup>8</sup> reported that nurses surveyed indicated high satisfaction with the transfer team and that the total number of restricted (light-duty) days was reduced by 361%.

What is needed is an approach to handling patients that involves (1) reeducation of the nursing staff, (2) a well-trained lift team, (3) modern mechanical lifting equipment, and (4) policies and procedures that clearly mandate a new method of handling patients.

To be successful, a lift team must be well trained not only in how to use modern mechanical lift equipment but also in the various needs of patients, for example, patients in traction with hip precaution or patients having heart monitoring. The sole job of the lift team is to lift and transfer. The members of the team must be readily available and must work closely with the nursing staff.

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Nurses are sustaining preventable back and neck injuries. It is time to end the behavior that results in these injuries. The agencies employed to protect workers must begin to do just that. Responsible agencies include the individual hospitals, the Occupational Safety and Health Administration, the American Nurses Association, and the nursing unions. Freeing nursing staff from lifting and transferring will not only prevent needless disabling injuries and keep more nurses on the job, it will also allow nurses to spend more time nursing, which is why most of us entered the nursing profession: we liked nursing!

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