

Nurses: You've Been LIED to about your Back and Body Mechanics

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Lift with your knees and not your back has been drilled into nurses as often as patient safety comes first. Just follow these body mechanics rules, and you will protect your back, nurses are told. The only problem is that it isn't true, and everyone but nurses knows all about it.

It starts in nursing school. The lie is perpetrated by management in just about every facility. They say they care about your health, your back, but is it true? Unfortunately, it is not. Many studies have shown, many experts have spoken out, and many associations have proclaimed that body mechanics are bogus, unsafe, and outdated. In fact, [NPR](http://www.npr.org) just published a four part investigative expose into the dangers faced by healthcare workers. You've been lied to when you were told body mechanics will protect your back.



Susan Wisnewski, RN, is not a new grad. In fact, she's been a nurse so long that she graduated from a diploma program. Body mechanics were taught as a part of her curriculum even then. In a telephone interview, she said, "I was taught body mechanics in school. We were taught the proper skills for moving patients and how to lift using your legs and not your back. Every year, wherever I worked, I had yearly training that went over body mechanics."

As an OR nurse, she tried her best to implement these teachings. "Yes, you use body mechanics, but if you're short staffed, you move patients unsafely. You are always positioning patients, and they are dead weight because of anesthesia. They weigh more. Sometimes you have to hold a patient's leg for prep, holding it over your head and standing for a long time."

Inevitably, Susan found herself with back problems. She can't point to one patient where she felt her back go out, but was told that her problems were simply from the wear and tear of nursing. After several spinal fusions, injections, radio frequency ablations, and worsening conditions, Susan was confined to bed, only able to sit upright for 15 minutes. And Workmen's Comp kept urging her to go back to work.

Susan did everything right, yet she ended up nearly paralyzed by the back problems caused by nursing. She isn't the only one, and facilities know that their nurses are at risk.

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About a Nurse

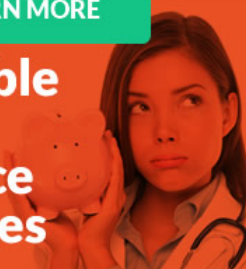


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The Lie about Body Mechanics

What are proper body mechanics? Anyone who has been through nursing school knows that it means lifting at the knees, flattening your back with your abdominal muscles, and using the large muscles of the legs and backside to move the patient. The only problem with this is that it won't protect your back.

In the past, textbooks used to teach nothing but body mechanics for patient movement. They still are, but with a caveat. According to Fundamentals of Nursing Skills and Concepts, 10th Edition, published in 2013, "The use of proper body mechanics (the efficient use of the musculoskeletal system) increases muscle effectiveness, reduces fatigue, and helps to avoid repetitive strain injuries (disorders that result from cumulative trauma to musculoskeletal structures). Basic principles of body mechanics are important regardless of a person's occupation or daily activities, but body mechanics alone will not necessarily reduce musculoskeletal injuries . . ." It still advocates body mechanics as a way to protect a nurse's back, but it gives a nod to the truth that the methods they are teaching are not as effective as health care workers have been led to believe.

Dr. Jim Collins, PhD, MSME, is the Branch Chief of the Analysis and Field Evaluations Branch, Division of Safety Research, a division of the CDC, and is not a proponent of the body mechanics paradigm. By telephone interview, he stated, "The lifting task should not exceed the lifting capacity of lifter. Loads for nurses are often excessive, and many postures are awkward, such as reaching across the bed. Even with good mechanics, the loads nurses lift exceed the safe lifting capacity of a worker, which is about 35 pounds."

The numbers bear this out. According to the National Institute of Occupational Safety and Health (NIOSH), injuries caused by overexertion were seen at a rate of 76 per 10,000 full time workers. Nursing home workers suffer these types of injuries at an even greater rate of 132 per 10,000, and emergency medical workers are the most at risk with a rate of 238 per 10,000. For reference, the national rate for all jobs is 38 per 10,000.

Team lifting has become a popular method for avoiding back injuries, but even this is not sufficient. Dr. Collins states, "The team lift not effective, because it doesn't distribute the load equally. Some people are taller or shorter. Nurses need equipment to lift a load, especially when the patient is totally dependent and non weight bearing. Some facilities have created new jobs for only lifters, but they are not always available. Nurses get tired of waiting and lift the patient themselves."

Even spinal surgeons with expertise in how the spine works know that body mechanics are not safe. Dr. Ty Thaiyananthan, neurosurgeon and founder of BASIC Spine in Newport Beach , CA, is an expert on the loads the spine can take. His opinion by telephone interview is that, " The techniques for lifting are not helping patients. You need assistive devices to move them. Squatting actually puts more strain on the lower part of spine. The forces can reach several hundred pounds per square inch. Bodies are not made to lift other bodies." He continues, "Back injury catches up with you. Give it a few years and it will, and that's why we see nurses very frequently."

If body mechanics aren't the solution nurses have been told it is, then what methods are available to safely move patients?

Safe Patient Handling and Mobility

Since body mechanics is out, the only possible way to safely move patients is through mechanical means of some kind. Dr. Gail Powell-Cope, PhD, ARNP, FAAN, Tampa Co-Director, HSR&D Center of Innovation on Disability and Rehabilitation Research and Director, Office of Nursing Service/ QUERI Partnered Evaluation Center, has been researching back problems in nursing for many years. She states in a telephone interview, "Nurses don't realize that the forces on the spine are creating damage that might not show up for years. If you understand the physiology of a disc, you might think differently. It is excessive force over a period. Even if you lift properly, you are still damaging the disc."

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She continues, "It does take longer to lift a patient using mechanical means. You have to go get the lift and bring it into the room. It makes sense to have lifts over every bed. Portable lifts can be stored conveniently to facilitate use. When stored in an alcove off the hallway instead of in a locked storeroom down the hall, it is more likely nurses will use the safe method."

Mechanical lifting usually means using a sling based lifting system, somewhat reminiscent of the Hoyer lift. However, technology has progressed since that lift, making it more comfortable, easier to use, and more reliable than its predecessor. Lifts are not the only way to move a patient, either. Air mattresses, specialized beds, and sliding boards are other ways to safely move a patient without affecting the muscles of the back. Back injuries from lifting don't only affect nurses, either. CNAs, radiology techs, and transport personnel are also in danger of hurting their back when moving patients without mechanical means.



Dr. Collins adds, "Facilities make policies that they are no longer a lifting facility. They initiate zero lift protocols that evolved into safe lifting programs. Unfortunately, nurses can't go 100 percent mechanical, and there will be a certain amount of hands on."

Dr. Powell-Cope asks, "Why isn't this universal? We need to know what's being taught out there. Nurses are now realizing they can't be in nursing for the long haul physically. Why aren't nursing students more upset about this?"

There is no easy answer as to why nursing students and nurses themselves aren't more aware of the danger that they are in. It has to do with the culture surrounding nursing, how they are taught to lift, and the politics of facilities.

The Culture of Nurse Lifting

The culture of nurse lifting exists on three levels: nurses themselves, facilities, and politics. Most nurses are still lifting because they simply do not know the danger they are putting themselves in by lifting, even when lifting safely. Through nursing school and into employment, nurses are lied to and told that body mechanics will protect their back.

"Nursing students, when looking for job, should ask about safe patient and mobility programs," Dr. Powell-Cope offers. "It's not just the equipment, but reinforced by a system of education. There should be peer leaders at the unit level with extra training on the mobility devices to help these nurses use the equipment."

Nurses also tend to be in a hurry, and it is easier to lift a patient into bed, regardless of the danger to themselves. Again, this goes back to nurses not valuing themselves as a member of the team. Nurses are drilled to think about patient safety, but very rarely to their think of their own.

Another problem is that doctors disagreeing with the lifting apparatus. Some surgeons do not like the extra bulk under the patient when performing surgery, and this means the nurses not only have to remove the equipment but also move the patient afterward without mechanical assistance.

Dr. Powell-Cope offers a solution, "We need to engage the physician about the moving equipment., What do we need to do to remove what is in the way? The physician is perceiving a barrier that is interfering with their job. It doesn't mean we should just do away with the safer means, but we need to look at how can we solve the problem."

The next step in changing the culture focuses on the facilities themselves. This equipment is expensive, and although it will protect their nurses, facilities don't want to put out the money needed to ensure safe lifting throughout their building. Dr. Collins proposes, "It all comes down to a financial decision. Ceiling mounted lifts over every bed are the most costly, including the price of slings under the sheets. The middle of the road solution is portable lifts on wheels, one for every 8 or 9 rooms. It has been shown that nursing homes can recover the funds in the cost benefit analysis in three years due to a decrease in workers comp benefits." (*continue*)

It all comes down to money. Nurses are not a priority in the facility's budget. Lifts and other mechanical devices do not earn the facility money, like an MRI machine would. They are completely out of pocket costs for the facility, and that makes them reluctant to buy the equipment that would protect nurses.

Facilities also make excuses. "The facility says it bought the equipment and it isn't being used," according to Dr. Powell-Cope. She asks, "What equipment did you buy? What kind of training did you give staff? There's a reason that the equipment you bought is not being used."

In the end, it will take facilities to accept that protecting their staff means making an investment. Some will because they care or they have the funds, but some will not unless they are forced to by an outside agency.



The Future of Lifting and Nurse Health

Already, eleven states have laws on the books that require facilities to have safe moving equipment for healthcare staff. However, this isn't as hopeful as it sounds. Either the laws don't go far enough, or they are unenforceable. The laws, though progressive, don't seem to be getting the job done. Dr. Powell-Cope states, "Legislation hasn't improve the situation a great deal."

Dr. Collins knows what it will take. "There is currently no federal law for safe lifting, but there was a bill introduced in the house, Bill HR 2480. In addition, the ANA developed safe patient handling national standards in 2013. These will not be effective until enforced by the joint commission. Even then, there is a segment that won't do it until mandated by law."

Outside of federally mandated statutes, Dr. Powell-Cope recommends, "The CNO of the facility needs to be supportive of programs. It falls under their domain. We found in the VA that one person needs to be a leader, a safe patient coordinator to make sure nurses are on board. There must be someone dedicated to safe patient handling."

Only when the culture of nurse lifting has changed and the federal government gets involved will this dangerous situation go away. The story of nurse Susan Wisnewski is indicative of many nurses around the country, but she has a happy ending.

After several fused vertebrae, Wisnewski continued to work as a nurse when her back allowed. Unfortunately, when pulling a patient over from the gurney to the table, she felt a pop. "I was on the side of the OR bed, holding up the johnnie to help the patient slide over. The patient grabbed my arm and pulled. I was against the OR bed and twisted my body. Because of the fusions, the SI joint went, and I felt a pop." She continues, "If you get injured, you are supposed to notify management. Since we were short staffed, though, I finished the case, then went to employee health."

The only way to help Susan now was to stabilize her SI joint. Workmen's Comp didn't want to pay for it, but she found Dr. Leonard Rudolf of the [Alice Peck Day Orthopedics, Alice Peck Day Memorial Hospital](http://www.alicepeckdayortho.com/) in Lebanon, NH. He is performing a procedure that is revolutionary in restoring function to the SI joint. It is called the iFuse Implant Procedure. Since the doctor was located out of her home state, she had to agree to end her Workman's Comp complaint if they would pay for this final effort to get her life back.

Fortunately, it worked. After a few weeks with crutches and a cane, she was cleared for everyday activity after six months. She now fills her time with skiing, warning her nursing student daughter about the dangers to her back, and looking into a management position.

"I feel I used proper body mechanics and they failed me. Some things a nurse is asked to perform are impossible to do with body mechanics. For instance, lifting over the head. We should be pushing for the manufacture of better devices and the let machines do it. Unfortunately, finances are involved and nurses are lower on the totem pole."

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Required Reading

[National Public Radio; Injured Nurses](#)

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