News
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****Is bed rest bad for patients?

DALLAS -- Strict bed rest is not always the best prescription for patients recuperating from a serious illness like a heart attack. Sometimes recovering out of bed is the best medicine.

"A lot of physiological changes occur when a person is restricted to bed rest," said Lynda Denton Lane, a clinical nurse specialist in cardiovascular physiology at The University of Texas Southwestern Medical Center. "For example, fluid shifts from the legs to the trunk when the patient lies down. The heart signals the kidneys to increase urinary output to get rid of what the heart perceives to be extra fluid. That can cause the patient to lose up to 10 percent of his blood volume. He also loses muscle and vascular tone. All those conditions cause him to faint when he does get out of bed.

"First, there's not enough blood in the circulatory system to keep the patient conscious when he gets up. Then the blood in the system pools in the legs because the vessels in the legs have lost their ability to push the blood back up to the heart. Tests also show that the bones lose up to .5 percent of their calcium a month if they aren't bearing weight."

These heart and vascular changes can develop in as little as three days of bed rest. Loss of blood volume and vascular tone is particularly harmful to acute heart attack patients because a poor blood supply by the vessels that cover and "feed" the heart is what caused the initial heart attack.

Lane is gathering statistics to support her philosophy that a patient knows when he's feeling well enough to get out of bed. She and co-researcher Dr. Elizabeth Hahn Winslow, assistant professor of nursing at The University of Texas at Arlington, believe a patient's request to get up for short periods should be considered, even after a major trauma or illness. Unfortunately, many common nursing practices are designed to keep the patient in bed.

The researchers recently examined the physical exertion placed on a patient during occupied and unoccupied bedmaking. Lane said, "Our studies show that sitting beside the bed while it's being made takes no more energy than rolling from side to side while it's made. Sometimes a doctor orders strict bed rest to conserve the patient's energy. Our study shows keeping a patient in bed just to conserve energy is ineffective."

Lane and Winslow based their conclusion on measurements taken on 18 healthy adults during the two bed-making methods: before, after and peak heart rates, oxygen consumption, before and after rate pressure products (that literally show how hard the heart is working) and perceived exertion.

Both occupied and unoccupied bed-making methods took less than 1.3 times the energy spent resting, the nurses wrote in Cardiovascular Nursing. "No significant differences were found in oxygen consumption during occupied and unoccupied bed-making. Thus, our oxygen consumption findings provided no basis to restrict either bed-making method. Because both methods took so little energy, patients should be able to tolerate either method."

(More)

However, Lane said certain conditions such as traction and orthostatic hypotension (low blood pressure upon standing) can make getting out of bed impossible or dangerous.

Lane said the study should be repeated on hospital patients. She expects the results to be the same. "Our previous studies looked at both healthy subjects and hospital patients. The hospital patients had lower oxygen consumption numbers than the healthy subjects. So we expect to find the same thing with this study. Hospital patients do things slower. They do things that are naturally easier on the body whereas you and I might choose a more difficult movement."

The study is the third in a series that examines the physical stress caused by common everyday activities. The next study will examine the physical stress of getting out of bed to perform daily grooming chores like shaving or brushing teeth.

Previous studies focused on the physical exertion caused by using a bedpan or bedside commode, and of taking a basin bath, shower or tub bath. Those results were the same as the bed-making results.

In the bedpan study, the nurses measured the heart rates, oxygen consumption, blood pressures and perceived exertion of the subjects -- 26 healthy volunteers, 16 cardiac outpatients, 27 medical inpatients and 26 post-heart attack patients -- after using a bedpan and a bedside commode. The results showed that using a bedside commode was not physically more stressful than using a bedpan. And the subjects patently preferred the commode.

"There's that psychological thing about urinating in your bed that's so terrible with the bedpan," Lane said. "People just hate it. It's hard to get on and off. It feels bad. You get your entire rear wet. You have to sit in your own urine. It's just plain disgusting, and it's not anatomically correct. You weren't made to do that."

Lane recognizes that bedpans are necessary for certain patients who are immobilized, suffering severe trauma or so debilitated they cannot get out of bed.

The bathing study compared the physical exertion of basin bathing, tub baths and showers. She and Winslow measured the oxygen consumption and heart rates of 18 heart attack patients and 22 healthy volunteers before, during and after the three types of baths.

The data show that the energy requirements of the three types of baths are similar. Responses to bathing seem to differ more because of the patient rather than bathing method. The nurses concluded that many cardiac patients can take a tub bath or shower earlier in their hospitalization. Lane and Winslow suggested more research to predict which patients are likely to have an exaggerated response to bathing and to develop clear guidelines for bath method selection and progression.

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