



UCHealth

Get pedaling: Supine Bike aids early mobility

Early mobility a key to short hospital stay

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By Erin Emery
UCHealth

Two years after joining a global movement to provide physical and occupational therapy as soon as possible for patients in the intensive care unit, [UCHealth Memorial Hospital, Colorado Springs, Colorado] has a new supine bicycle to help restore mobility for patients who cannot get out of bed.

“Medical experts used to believe that resting in bed was the best medicine but that is no longer the case,” said Meghin Purdy, a physical therapist for Memorial. “Mobility is now a piece of the care, just like medication and it is something that patients have to be doing every day as long as they are medically stable and the doctor has approved the therapy.”

Research shows that early physical and occupational rehabilitation reduces the time a patient spends in the hospital, lessens the duration of ICU-induced delirium, results in fewer patient days on a ventilator, and improves physical outcomes and independence for patients when they leave the hospital.



Leighann Jock, clinical nurse specialist for critical care, [together with Stephanie Huber, Clinical Trainer, Restorative Therapies, demonstrate how a supine cycle (RT300 Supine, Restorative Therapies)], a gift of the Memorial Hospital Foundation, helps critically ill patients restore mobility.

Memorial’s supine bike – a gift of the Memorial Hospital Foundation – can be used even when a patient is sedated to help reduce the loss of muscle mass and weakness that comes with a long hospital stay.

Cara White, an ICU nurse for 18 years at Memorial, asked the hospital to purchase a bicycle after she saw one on display at a nursing conference. White asked her boss, Suzanne James-Harmon, who then asked Associate Chief Nursing Officer Tamera Dunseth-Rosenbaum, who then sought funding from Cari Karns, director of the foundation.

The supine bicycle slides over a patient’s bed. A nurse or physical therapist places the patient’s feet or hands in stirrups attached to the pedals, allowing the patient to exercise the arms and legs. The bicycle can also be set on automatic, so patients who are too weak to

pedal the bike can still benefit by having the bike do the work for them. The nurse can control the speed of the rotations on the bed and monitor the patient's vital signs. Patients can track their progress – distance, speed and frequency of use – on an app.

“I've just seen so many people who can benefit from this,” White said. “You have some people who can do nothing all day but stare at the ceiling and wait to get better. This gives them something to do. It makes them feel as though they are helping themselves heal.

“We can use this bike for people who can't get up and out of bed, but it will help them maintain strength in their arms and legs. That means that when they are healthy enough to get up, their legs and arms will be strong,” White said.

In October 2012, Memorial's ICU nurses and physical and occupational therapists began an early rehabilitation intervention program focused on getting people moving at the earliest opportunity.

“As soon as a patient gets to the ICU, as soon as possible, we are looking at mobility and doctors are putting in orders for rehabilitation,” Purdy said. “It can be as simple as raising the head of the bed up 30 degrees. For a patient who has been flat on their back because they've been on the ventilator for so long, that is a huge amount to go past 30 degrees.”

The therapists then work to progress the patient to sitting on the edge of the bed, getting up and sitting in a chair and, ideally, to walking around the halls of the ICU.

White said it is not uncommon for people who are on ventilators to get up and walk the halls, as long as the patient is stable and the doctor has approved the physical activity.

“We had one young man who came in with severe pneumonia and he was up in the chair every day and he was walking on the ventilator every day,” White said. “He never went to rehab. Normally, a patient lying in a bed for a couple of weeks in the ICU loses so much muscle mass and becomes so weak that rehab is necessary.

“This young man, we had him up and walking so he didn't have to go to rehab. We have all of the nurses on board to get people up and moving, and this bike will help us bring mobility to people who can't get out of bed,” White said.

White said she is grateful to the foundation for supporting early mobility efforts in the ICU.

“We had raised money from the gala last year to support the cardiovascular line,” Karns said. “This is a wonderful example of what the Foundation does – we raise support to be able to provide cutting-edge technology and patient resources to improve health for our patients.”

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