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Timely therapy

Interactive metronome therapy helps stroke survivor do little things that mean so much Written by

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Stroke survivor Elnora Coates of Jackson taps numbers on cards to the beat of a tone she hears through headphones Friday at Quest on Lakeland Drive in Jackson as occupational therapist Julie Walker looks on. The task is part of an interactive metronome exercise session that will improve functioning of Coates' right arm and hands. Below, she prepares to clap her hands in beat with the tone she hears. / Photos by Joe Ellis/The Clarion-Ledger

therapy to enhance her functional status.

Despite months of comprehensive rehabilitation following a stroke in October 2009, there were still things Elnora Coates, 62, of Jackson couldn't do.

"One of the main things that I couldn't do was give myself my insulin," says Coates, formerly of Vicksburg who also has type 2 diabetes.

Other daunting tasks included flipping a light switch, zipping or buttoning clothes, cooking, writing, getting out of bed and bathing.

In April, her occupational therapist Lisa Poe who works at Quest - a Methodist Rehabilitation Center outpatient program in Jackson - began incorporating the interactive metronome program into Coates' weekly

The IM program works as a patient tries to synchronize hand and foot exercises to a computergenerated tone heard through a headphone. The computer calculates how many hits and misses the patient makes to give therapist and patient immediate visual and auditory feedback.

Interactive metronome has been around for about 10 years. Quest has used it for two years, and several therapy programs in the state also utilize it.

The IM is designed to improve timing, coordination, motor planning and processing skills; and cognitive function with speech, thinking and staying focused.

"Basically, it's helping re-wire the brain," says Poe, who also travels the country teaching IM to other therapists.

To get patients motivated, Poe typically asks them what tasks they find difficult and then customizes the therapy accordingly.

Coates' stroke paralyzed her right side. Her exercises include tapping numbers on a wall to the

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beat of the tone she hears through the headphones. At times she uses a soft baseball bat to tap with her right arm and other times she uses her right hand while holding the device to record the hits and misses.

Another exercise involves waving both arms in a circular motion as she claps to the beat of the tone.

She also uses the Gait-Mate portion of the IM, in which a sensor is placed in her shoe. While walking, she ensures her foot hits the floor on time with the tone.



"When I first got it... I didn't know what in the world I was doing," says Coates. It took a couple of days to get past the frustration of the exercises - not fully understanding how they would work and to become as accurate as possible.

After completing a series of IM exercises, patients did functional tasks at Quest such as cooking, setting

the table and putting dishes in the dishwasher.

Eventually, Coates was flipping light switches at home without even realizing her accomplishment. Last Christmas, she was overjoyed to get all of her cooking done instead of sitting and giving orders as she did the year before.

"You find yourself doing things automatically, just doing them," she says. Nearly all stroke patients can benefit from IM. Those with too much tone or tightness in an extremity may be unable to complete the exercises.

"There are some specific criteria, but if they've got some functional use of their upper extremity and they're having difficulty with doing specific tasks, it's a good possibility," says Julie Walker, occupational therapist and Quest therapy manager.

The IM is not limited to stroke patients. It is used for those with traumatic brain injury, spinal cord injury, autism, cerebral palsy, Parkinson's, multiple sclerosis, limb amputations, dystonia, balance disorders and kids with attention deficit disorder.

To help athletes with timing, some NFL teams and motocross racers also use the IM.

"I think this is top of the line to help stroke patients because it can enhance acute care," Poe says. "Until the IM came along, there was no objective feedback within the millisecond level."

The sooner a patient gets treatment, the better, says Poe, but patients who had a stroke 20-plus years ago can benefit from the therapy. Patients will have to complete at least 12 sessions to see results.

Coates' therapy was daily for two weeks and later for an hour three times a week. She recently started going once weekly.

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"I'm 95 percent of where I was (before the stroke)," Coates says. Zippers and buttons are a snap. She can bake a cake now, pick greens and has gone back to work at the Good Shepherd Community Center in Vicksburg.

"I can cook mostly anything," she says. Though she may need help with a heavy pot. And she's learned - finally- to ask for help if she needs it.

"A person who has never been in this situation, they don't know how it is."

Her next goal is to drive again. She's been out on the driving evaluation provided through Quest and is waiting on the modification of her car.

"When I get to drive, I'll be even more motivated," Coates says.