

# A virtual leap

By Amie Silverwood

Residents with limited mobility are finding their second youth through videogames. NeuroGym's Bungee Walker is a machine that provides graduated support from a mobile seat underneath the resident but allows mobility for those who depend on walkers or canes. Extencicare Falconbridge is the first northern long-term care home to pair the Bungee Walker with Nintendo's Wii Fit for less mobile residents to enjoy such familiar activities such as bowling, tennis and even ski jumping.

The Bungee Walker supports the resident from behind with bungee cords so they can walk without a walker. By freeing up the patient's arms, they're able to play games like badminton or kick a ball. They're fully supported from the back but they are able to move in a natural way.

Cindy Rose, Resident Program Manager, purchased the Nintendo Wii to broaden the scope of activities in which residents can participate. Unlike other videogames, it comes with a board that senses weight and pressure and a wireless controller that is tracked by the console. The result is a figure on the television screen that mimics the player's movements and is sensitive enough to calculate posture and balance.

Wii Fit, a game that can be purchased with the console, allows the player to perform a variety of tasks like tightrope walking, ski jumping or even heading a soccer ball. Some of the games offered for the Wii are familiar and perhaps nostalgic for residents (hula hoop or fishing), while others are an opportunity to try something new like yoga, slalom skiing or ski jumping. Whatever the game on the screen or whoever the resident is who has the controller, videogames draw plenty of attention.

Some of the residents are much younger than the median age, in their forties or fifties, and need extra encouragement to leave their rooms. They are more familiar with videogames than older residents and feel more comfortable playing them than participating in other activities at the home. Players always draw a crowd.

"They sit around and they just watch each other and cheer each other on," explains Rose, "it's very social and physical and they love it."

The Wii is also popular when family members come to visit. Residents are able to show off their new skills or have a friendly competition against grandchildren.

But it wasn't until the team began using the Bungee Walker with the Wii Fit that the full possibilities of the pairing became apparent. Suddenly residents with limited mobility were working on their balance, doing squats and working on their posture and enjoying the experience. The game is able to track the resident's progress and to illustrate their areas to improve in a constructive way.

There's nothing like watching yourself bundle down a ski hill as a snowball to get the point across that you lean a little to the left when getting up out of a chair. Residents can try and try again until they are able to land the ski jump (by standing up straight) with their friends cheering them on. The reward is the progress that is made on screen and that their bodies are strengthened through the exercises.

Though the videogame console was originally purchased to encourage residents to play games together, it has become a therapy tool used by the kinesiologist manager, Kimberly Lapierre. When residents play various games like tennis,



it makes it easy to identify weaknesses through their swing.

When someone is playing Table Tilt, a familiar game that requires tilting a board to direct a small ball into a hole, instead of holding the game in his hands, the balance board the patient is standing on becomes the virtual table to be tilted by the weight of the patient's body. Shifting weight into his right leg will tilt the board down on the right side and shifting weight into his toes shifts the board forward.

When the game begins, he must first find his centre of gravity to keep the board relatively flat. As he becomes more aware of where his weight is held, he has more control over the board and is able to control the ball's movement. As the patient becomes more aware of his posture, it is corrected so that he is steadier when getting out of a chair and he has less risk of falling.

Even the balance board that is provided with the Wii Fit game is used to gauge the resident's posture says Lapierre, "because it's not a high step but it's enough to put them off balance yet they're still fully supported. And it's interesting to see them when they're off balance and how they try to correct themselves because that's what we want for them to work on. If that happens in real life, they can self-correct and have that mobility."

"And we really want," stresses Kim, "not just visitors but other residents and families who visit the home to see that there are youthful aspects to long-term care."

There are some activities, however, that are too difficult for residents to attempt. The Wii was made for children primarily and not for seniors as a therapy tool. For some activities, it depends on the resident's dexterity and cognitive development whether they can perform the tricky combination of pressing buttons and moving the two joysticks at the same time. Such games can be challenging for those who are from a generation that is unfamiliar with videogames. But there are some games that are easy to pick up because of the familiarity of the activity.

"We have one that simulates a car, which is easy for them to know how to do as well. It really brings them back to what they used to do and they've really enjoyed it," says Rose.

Residents who were avid players of sports, have now regained the ability to partake in physically active programs, such as swinging a tennis racket, golf club, hockey stick or kicking a ball. With the physical support of the Bungee Walker and the virtual support of the Nintendo Wii, the possibilities of playing favourite sports is once again a reality for the residents of Extencicare Falconbridge. **HFM**