A stroke patient stretches out a weak arm and grabs a hovering spaceship. A chronic pain sufferer asks his doctor if virtual reality could help. A veteran relives his battlefield experiences in a safe environment to help deal with post-traumatic stress disorder.

Therapeutic approaches that immerse patients in virtual environments abound. Until recently, the treatments were mostly limited to severe cases in clinical settings because the commercial hardware was expensive, says host.com reporter.

High-end virtual reality setups require not just the headset, which can run several hundred dollars, but motion-tracking sensors as well as a dedicated game console or a fast-processing PC with a heavy-duty graphics card. The costs can add up to thousands of dollars.

But thanks to a recent proliferation of VR hardware, including headsets that incorporate a user’s smartphone, prices are falling faster than you can blink an eye.

Samsung’s Gear VR costs $199. Google’s new Daydream View, which comes with a Bluetooth controller and limited motion-tracking controller, currently sells for $79.

The US VR Play from Chinese tech giant Xiaomi sells for $108.46. It’s a standalone device that can be used with a PC. Virtual reality is also becoming more affordable for virtual reality can become a part of everyday life. The price of a VR headset has dropped significantly in recent years, and it is now more accessible to a wider range of people.

But VR is not just a great tool, especially when you compare it to traditional rehabilitation methods. VR can be extended to help in the treatment of various conditions, such as pain management, rehabilitation, and even psychological therapy. For example, VR can be used to help patients with chronic pain or physical therapy patients, such as stroke patients, who need assistance.

And because gaming companies are focusing on creating immersive experiences, VR can be used to help patients who are dealing with pain management, rehabilitation, and psychological therapy.

VR offers patients a virtual environment where they can practice various movements and activities, such as walking, reaching, and grabbing objects, to help improve their range of motion, muscle strength, and coordination. This can be particularly beneficial for patients who are recovering from injuries or undergoing rehabilitation.

For instance, VR can be used to help patients with stroke to practice moving their weak arm and hand, and VR can also be used to help patients with chronic pain to practice movements that can help alleviate their condition. Additionally, VR can be used to help patients with psychological conditions, such as anxiety or depression, to practice coping strategies in a safe and controlled environment.

Well, that sounds like a lot of fun. And for the patients and people alike, accessible tech could transform the way we treat psychological and mental ailments. Here’s how:

**True immersion**

Because of the increasing affordability of virtual reality setups, medical professionals won’t need expensive setups to achieve full immersion in the virtual reality experience. VR devices will be built into the hardware, such as the immersive cockpit of the leather bedroom.

Alternate realities will be easier to achieve with the use of virtual reality technology. Users can experience new sensations such as heat or cold, and they can feel the physical sensations associated with them.

But in the virtual world, the technology can help expand the user’s mental and emotional horizons. For example, patients can participate in virtual reality experiences that evoke the feeling of being in a heartbeat or a flight.

**Layered reality**

Virtual reality doesn’t work for everyone. Some people have a hard time and although simulation sickness isn’t common, it can happen. Andrea Stevenson Won noted.

When a person enters a virtual reality environment, the brain processes the visual, auditory, and haptic stimuli to create a sense of presence. However, some people may experience a disconnection from the virtual environment, such as when they are driven by the bus.

And because gaming companies are researching on algorithms that change virtual interactions in real-time to match the user’s capabilities, therapists can tailor the VR program to a beginner level and then gradually scale up the difficulty until the user feels confident enough to visit the virtual world.

VR is almost like having therapy inside the game, personalizing exactly how you should extend an arm to grab a fake spaceship.

**Brainpower**

When a VR experience is truly interactive, that tricks the brain. Mind-bending, repetitive movements for rehab can be transformed into magical quests, sci-fi adventures and daring feats.

Lever said, “Maybe your goal is to grab the spaceship as it goes across the screen and throw it at an alien ship or planet.”

“VR is a body of literature that says VR can get people moving in ways they might not know they’re capable of in a real situation,” Stevenson Won noted.

While at Stanford, Stevenson Won worked on VR with pilot studies to treat a syndrome known as COPS, which can cause cognitive and motor impairments in the body. Some COPS patients needed headsets and just physical therapists on their ankles.

Virtual realities: materialized in a random sequence. When the patient moved in a way to the avatar landed a kick, the bubble mate a popping sound.

The haptic floor also vibrated. Game was the winning and the functionality that contributed standard physical therapy sessions to move their affected limbs.

Affordable VR will take immersive therapy mainstream. With Oculus Go, but new wearable devices like Microsoft’s forthcoming Hololens and a display from the immersive startup Magic Leap promise to do the same in 3D.

“People want to try it and we can leverage this for non-medical purposes, but you want to find a way to do the effects are.”

Researchers and developers are beginning to bring a systematic, clinical approach to creating immersive experiences.

Lever called this evidence-based game mechanics: “Instead of just putting chocolate over the broccoli — just giving everything everything we’re really starting to think, what do we know about what makes a good game, and reward, and interaction, and challenge?” she said.

When asked if children who were asked to do virtual reality rehabilitation every day for several weeks, they found that the novelty wore off. Lever envisioned better ways to look at brain activity during tasks so researchers can quantify and measure engagement. Once we understand how to keep boredom at bay over time, we can design stronger virtual reality treatments.

Lever and Stevenson Won expected that, in the future, more healthcare professionals will be able to leverage virtual reality technology can do for their patients.

Lever said, “It’s just a great tool, especially when you compare it to more invasive treatments.”

Researchers have developed a method for more precisely controlling the emission of electrons through the tiny metal tip of an electron microscope.