**Virtual Reality’s Impact on Seniors Ability to Avoid Falls**

What is Virtual Reality (VR)?

* Are you one of those grandparents that have been asked to buy Christmas or birthday presents that you’re not quite sure you understand? But absolutely willing to foot the bill cause… you know… grandkids.
* Virtual reality (VR) is the experience where users feel immersed in a simulated world, via hardware—e.g., headsets—and software. Designers create VR experiences—e.g., virtual museums—transporting users to 3D environments where they freely move and interact to perform predetermined tasks and attain goals—e.g., learning.

***SOURCE:*** Interaction Design Foundation

<https://www.interaction-design.org/literature/topics/virtual-reality>

**Virtual reality balance training for elderly: Similar skiing games elicit different challenges in balance training**

**Background:**

Virtual Reality (VR) balance training may have advantages over regular exercise training in older adults. However, results so far are conflicting potentially due to the lack of challenge imposed by the movements in those games. Therefore, the aim of this study was to assess to which extent two similar skiing games challenge balance, as reflected *in center of mass (COM)* movements relative to their *Functional Limits of Stability (FLOS).* Proprioceptive positions and balance specific exercises

**Methods:**

Thirty young and elderly participants performed two skiing games, one on the Wii Balance board (Wii ski – Nintendo Wii), which uses a force plate, and one with the Kinect sensor (Kin ski – X box 360), which performs motion tracking. During gameplay, kinematics was captured using seven opto-electronical cameras. FLOS were obtained for eight directions. The influence of games and trials on COM displacement in each of the eight directions, and maximal COM speed, were tested with Generalized Estimated Equations.

**Results:**

In all directions with anterior and medio-lateral, but not with a posterior component, subjects showed significantly larger maximal %FLOS displacements during the Kin ski game than during the Wii ski game. Furthermore, maximal COM displacement, and COM speed in Kin ski remained similar or increased over trials, whereas for Wii ski it decreased.

So, what they are saying is that the researchers saw greater increase in balance when the participants were using the x box game, Kin Ski.

**Conclusions:**

Our results show the importance of assessing the movement challenge in games used for balance training. Similar games impose different challenges, with the control sensors and their gain settings playing an important role. Furthermore, adaptations led to a decrease in challenge in Wii ski, which might limit the effectiveness of the game as a balance-training tool.

***SOURCE:*** National Institute of Health

 <https://pubmed.ncbi.nlm.nih.gov/29028622/>

**How Virtual Reality Is Benefiting Seniors**

It’s usually the youth that is associated with cutting-edge technology, but we’re seeing an unlikely group of early adopters emerge—the elderly. Virtual Reality (VR) is being used to better the lives of senior citizens all over the world by reducing loneliness, improving their mental health and transporting them to far-flung places without needing to leave the comfort of their home.

Stay connected to the joys of life. Shot of happy senior women using virtual reality headsets together at a retirement home. Stay as connected as possible to hobbies and favorite past times.

These are some recent examples of the ways immersive technology is having a positive impact on seniors.

**VR Can Counteract Feelings of Loneliness**

Kenta Toshima, a Tokyo researcher, is using VR to help nursing home residents visit places from their pasts and tick off locations on their bucket lists. He's doing it by capturing made-to-order VR experiences with an 8K 360 camera.

The project came about while Toshima was working in a care facility and an elderly patient mentioned to him that she wished she could visit her favorite plum orchard. Toshima decided to visit the orchard and take pictures for her, but realized that it was difficult to take photos and videos that matched her memories. He was then inspired to use a 360-degree camera to help create a wider and more beautiful view of locations that the patients could explore with a VR headset.

“By supplementing their physical handicap with technology, the VR travel experiences can help improve the elderly’s motivation for rehabilitation and improve their quality of life. The VR experience makes them feel like they are out of the nursing home and can help ease their anxiety and loneliness.”

While virtual reality experiences are usually done alone, running a program in a nursing home allows multiple patients to use the technology at once. Sharing their feelings and experience with those around them creates a sense of community which can counteract feelings of loneliness.

Videos of the elderly patients experiencing new places in virtual reality are shared on Toshima’s social media accounts—the results are truly heartwarming.

**VR Allows Seniors to See Their Future Home Before It Exists**

Moving is a major life event at any age, and it’s even more significant for retirees. To help seniors feel comfortable in their housing decisions, Cloverwood Senior Living is partnering with Arnold Imaging to use virtual reality to fully immerse prospective residents in a tour of the future Terraces at Cloverwood, allowing them to envision themselves in their potential new home.

According to the U.S. Census Bureau, people over age 65 represent 16% of the total U.S. population. By 2030, all Baby Boomers will be over the age of 65. Cloverwood’s introduction of immersive VR to the next generation of retirement living is giving seniors peace of mind, eliminating fear of change, and lending a memorable and impactful experience they can’t typically be offered before construction of a physical building.

Neuroscientists have learned that the way our brain makes big decisions—like where to live—draws from emotions we’ve stored and previous experiences (both positive and negative), then cross-references that with places we’ve been. If it’s a positive experience, we move forward; if it’s negative, we retreat.

“We are removing the barrier of the unknown as people are able to see themselves in their new community and their new apartment. The tour has been met with great enthusiasm and excitement, defying stereotypes about older adults not being willing to embrace new technology. Our experience has been quite the opposite. The use of VR is mitigating anxiety because seniors are able to get an authentic and emotional feel for the atmosphere that typical renderings and 2D technology can’t offer.”

**VR Can Be Used for Travel and Time Travel**

Two Tucson retirement communities are the launch pad for a program to see how virtual reality technology helps senior citizens with cognition, dementia, loneliness and other issues.

Via Oculus Quest—Facebook’s standalone VR device—elderly residents have been able to ride on a roller coaster, visit the Egyptian Pyramids and take a trip down memory lane, back to places they used to live.

The program—Engage VR—was developed by Grayson Barnes, a 20-year-old Rochester Institute of Technology student for Watermark Retirement Communities.

This photo shows Joy Kay, resident at The Fountains at La Cholla, using a virtual reality device to ride a roller cosater similar to the one she grew up with during the virtual reality program, ″EngageVR″.

Joy Kay, resident at The Fountains at La Cholla, using a virtual reality device to ride a roller ... [+] REBECCA SASNETT/ARIZONA DAILY STAR VIA AP

**VR Can Help Tackle Social Isolation**

Studies have found that isolation and loneliness are worse for health than obesity or smoking, especially if you are over 50—the risks of prolonged isolation are equivalent to smoking 15 cigarettes a day.

With this in mind, AARP Innovation Labs built Alcove, a VR app which focuses on family and social connection. Alcove bridges the physical distance between family members and empowers people to experience new places and things they wouldn’t otherwise be able to do because of cost, time or mobility constraints.

The immersive ecosystem that AARP has built at human scale allows users to enter and navigate on their own, or in multiplayer with their family and friends. For example, you can traverse a home with an elderly parent living alone. At first glance, the home seems ordinary, but users soon realize it is not.

“There are no bedrooms, bathrooms, or kitchen. Instead, it is home to a magical space that invites discovery and allows users to transport themselves to new worlds, and explore the complete immersion and interactivity that VR has to offer.”

**Alcove** seeks to bridge the physical distance between family members and empowers people to experience new places and things that they wouldn’t otherwise be able to do.

Alcove was developed in collaboration with Rendever—a startup which has a virtual reality platform that provides cognitive stimulation and socialization to seniors.

***SOURCE:*** <https://www.forbes.com/sites/solrogers/2020/02/26/how-virtual-reality-is-benefiting-seniors/?sh=447075ec1485>

**Virtual Reality for Seniors: A Practical Guide**

**What Can Seniors Do in VR?**

There are many wonderful activities and experiences in virtual reality that are beneficial and most seniors will surely find entertaining. Below are some examples.

**VR Tourism & Travelling**

Virtual reality lets the elderly travel anywhere they like from the comfort of their seat. With apps such as Google Earth VR and Wander, they can visit the Grand Canyon, Eiffel Tower in Paris or why not The Great Wall of China.

In addition to famous landmarks, seniors can bring back old memories and visit places they are already familiar with. Be it their birthplace, the school they went to or the location they got married. Be ready for an emotional ride on memory lane!

**Immersive Video Experiences**

VR enables you to watch 180/360-degree videos, that are not the average plain media content you might get from TV for example. With VR, the experience is much more realistic and similar to the sensation one would get from the real world.

This enables seniors to (re)experience things that they cannot physically do or things they could just not cross off their bucket list. Meet a lion, swim with the dolphins, fly to the moon or why not go ahead and climb Mount Everest?

**Socializing**

Loneliness is a very common problem as people get older. Although nothing replaces physical face-to-face interaction with other people, VR can still help older people feel more connected.

With Bigscreen, seniors can enjoy a movie session with cinema fans from all around the world and interact with them. VRChat and RecRoom enable more of a free form chat and various activities you can partake with other people.

**Exercise**

Exercise is good for us, humans. This is especially true for seniors who need regular physical activity to maintain and also improve their health and mobility. VR offers a variety of games to promote an active lifestyle and have fun while doing so.

**59-year-old enjoying Beat Saber**

Pop balloons with your head, slash music beats with lightsabers, play ping pong or shoot alien spaceships while dodging the bullets. There are a variety of games and experiences for different interests and more content is being developed all the time.

**Playing Games Just For Fun**

There are many VR games that are perfectly fine for older people to play. You can find several good recommendations from my previous articles Best VR Games & Apps for Seniors and 11 Best Seated VR Games.

**Can Seniors With Glasses Use VR?**

It often is the case, that older people need glasses to see properly (mostly reading glasses for objects up close). This raises the question: can people with glasses use VR properly? The short answer is: yes they can.

In reality, seniors who require glasses in real life, might not need them with VR at all. Let me explain.

Even though the display in the VR headset is physically very close to your eyes, the lenses (placed between the display and your eyes) bend the light in a way that the actual focal point is approximately 2 meters (~6.5 feet).

Because of this optical “illusion”, if the senior can see objects clearly at a 2-meter distance in real life, there is a good chance he or she won`t be needing glasses for VR at all.

And even if the person fails the “2-meter test” and objects are blurry when using a VR headset, this is not a show-stopper at all. Most (if not all) VR manufacturers have considered the needs of people who wear glasses and they have left enough space within the VR headset to fit the glasses in as well.

So, with or without glasses, seniors will most probably be able to enjoy the wonders of virtual reality too.

**Choosing The Right Headset for Senior**

If you already own a VR headset, then you most probably will be letting your senior relative or friend test VR out with that particular headset. Move on to the next subtopic: “Preparation for VR Session “.

However, if you do not have a VR headset and are looking for one that would best suit the elderly`s needs, then I have a couple of recommendations for you. As of 2020, I would say there are two options that currently stand out from the rest.

**Oculus Go – Simple, yet Immersive Multimedia headset**

My first recommendation is the Oculus Go which you can find from Amazon. It is a standalone and wireless VR headset, that is essentially “plug and play” and is most suitable for virtual traveling, watching various video content and playing some simpler games.

**Best VR Fails & Wins (2022)**

Since this device does not have room-scale tracking (only 3DoF), it is suitable for elders with limited movement who would use the headset while seated or lying down.

Also, worth mentioning about the headset – If the senior is able to handle a TV set, with a bit of patience, you can most probably teach them how to use the Oculus Go headset as well.

**Oculus Quest** – An Easy-to-use Multipurpose headset

The second senior-friendly VR headset I would recommend is the Oculus Quest. This headset is also standalone and wireless. You do not need a PC, mobile or a gaming console do run it – just hit the power button and start enjoying.

There are also no wires for the senior to stumble onto which makes for a safer experience. Compared to the Oculus Go, the Quest is more advanced and therefore also the pricier option.

The headset has room-scale tracking (6 DoF) and this is where the full range of virtual reality experiences come into life. Oculus Quest, therefore, is perfect for an elder who is still able to walk around and move their hands with relative ease.

Like the Oculus Go, the Quest is rather simple to operate and with a slightly more tech-savvy elder, you will most probably able to teach them to operate the headset on their own.

**Preparation for VR Session: Understanding the Elderly`s Interests & Needs**

Before strapping on the headset and diving into virtual reality, it would be a good idea to find out some additional information about the senior you are going to work with. This is necessary to make sure the VR session will be safe and tailored to that particular person`s needs.

**Mobility**

The first aspect to think about is the mobility of the senior. Does he/she walk around easily and without assistance? How well to their hands and arms move? Based on this information, you can determine how and what type of content and experiences to provide for them.

**Motion Sickness**

One of the side-effects of using VR might be motion sickness for some people. This is especially true for VR experiences and games where there is a lot of movement and rotation happening.

Ask about the senior`s subjective opinion about how prone they generally are to getting nausea. Based on this information, you will know which baseline for the “action” level to take.

However, I think it is almost always a good idea to start with slow-paced experiences where there is little movement happening. From there, you can gradually introduce more action-packed content.

**Interests of the Senior**

The best experiences are always the ones that are tailored to the particular person’s needs and interests.

Think about the senior you are going to introduce VR. Do you know any interests and/or hobbies they currently have or have previously had? What are the things they like?

If possible, ask them about this directly. Do they like nature? Animals? Which places in the world would like to (re)visit? Are there any bucket list items they weren`t able to complete?

Based on this information, you can start searching for VR content that would be related to these interests.

**Choosing Games & Experiences for Elderly**

I have already given a couple of recommendations for games and experiences in this article. You can also find several excellent ideas from my previous article 9 VR Games & Experiences for Seniors.

The thing to keep in mind here is that there is no single best game or experience that fits for all. Each person is different with their own unique preferences and needs.

Take into consideration the particular senior and the research you have done. Based on their interests and mobility, research various VR experiences that would be the best fit for them specifically.

If you get it right and see the pure emotions and happiness they express, you will know it has been well worth all your effort!

**Important For VR Session & Ensuring Safety**

There are a couple of recommendations to think about before starting the actual VR experience.

**Read the Manual**

Yes, I know – nobody likes to read manuals. However, I encourage you to go over the safety tutorial and tips from the manual even if you are accustomed to the headset.

Things that are intuitive and natural to you, might not be the case for the senior person. By reading the manual, you will be better prepared to understand important factors in the context of seniors using VR

**Swivel Chair**

The use of a swivel chair will become really handy for 180/360-degree videos and experiences, especially for seniors with limited mobility. This way the elderly can rotate the chair and don`t have to strain their neck to look around in the experience.

For added stability and safety, it would be handy if the swivel chair comers with armrests. These help to keep balance during the VR session and are useful for helping the senior to get out of the chair.

**Clean Out the Play Area**

This is true for anybody using VR – you have to clean the play area of any objects you might bump into. If you don`t that, you risk hurting yourself (or the senior in this case) and breaking items in the room.

**Talk about the Experience**

Talk with the senior! Ask them about the experience they are having. It could very well be that the headset is not adjusted properly and they are actually only seeing a blur (without knowing any better that something is wrong)

Maybe the experience is too much for them and they are feeling nauseous – in that case, it always a good idea to stop right away. It won`t get any better, only worse.

And if everything is going smoothly and the senior is enjoying the experience, talk about it both during and after the session. Reflecting on what they experienced and how it made them feel, is a sure way to further enhance the experience they get.

***SOURCE:*** Smart Glasses Hub

<https://smartglasseshub.com/vr-for-seniors/>

**10 Best VR Games for Seniors and Elderly**

By: Amanda Blain (May 19, 2022)

What are the 10 best VR games for seniors and elderly? What are the best Quest 2 games for seniors?

Lots of elderly and seniors really enjoy VR. Their needs might be slightly different when it comes to gameplay, especially when starting out.

**VR Senior Care - 10 Best VR Games for Seniors and Elderly**

Most senior players want a VR game that is easy to use, allows them to play with family and friends, and allows them to use their minds while getting a small amount of physical activity too.

We will explore some of the more popular choices, as well as links to full detailed reviews so you can explore which are the best Virtual Reality games for elderly players. These are in no particular order and all are great choices to explore for seniors.

**Real VR Fishing**

Real VR Fishing is very realistic, fishing in your VR headset. It is currently one of the most popular games available on the Oculus Quest 2. You explore your beautiful cabin, visit amazing locations and catch fish. Each fish brings your close to unlocking more equipment and locations. There is also a very popular multiplayer portion of the game.

*Why This is a great VR game for Seniors:* It is fishing! Even if you are not a big fishing person in real life, VR fishing offers a lot of relaxing benefits for seniors. There are also very easy-to-use controls. Multiplayer is popular and this is a great game to play with grandkids.

Check out the Full Review here – <https://www.worldofgeekstuff.com/real-vr-fishing-review/>

**Walk About Mini Golf**

Walkabout Mini Golf ReviewWalkabout Mini Golf VR takes all the parts you love about real-life mini-golf and brings it to you in VR. The game boasts about accurate physics, lots of courses, and tons of multiplayer fun.

Why This is a great VR game for Seniors: Mini golf is fun for all ages. The whimsical settings make for an enjoyable time. Controls are super easy. Multiplayer is extremely popular and is another great choice to play with family members or grandkids.

Check out the Full Review here – <https://www.worldofgeekstuff.com/walkabout-mini-golf-review-mini-golf-vr-fun/>

**Nature Treks VR Review**

NatureTreksVRReview - 10 Best VR Games for Seniors and ElderlyNature Treks VR is a VR experience that allows you to visit multiple amazing worlds and explore beautiful locations and animals. Hop into Green Meadows. A bright relaxing spring meadow and play with some deer, birds, and bunnies.

Why This is a great VR game for Seniors: This is a truly beautiful and relaxing VR experience. The controls are straightforward. There is no goals or scores to achieve, just a relaxing enjoyable experience.

Check out the Full Review here – <https://www.worldofgeekstuff.com/nature-treks-vr-review/>

**Guided Tai Chi VR Review**

Guided Tai Chi VR ReviewGuided Tai Chi is a relaxing and different way to work out. Tai chi is sometimes called “shadowboxing”. It is a type of Chinese martial art that has many benefits including defense training, health benefits, and mediation. It is a great way to reduce stress and increase flexibility and balance.

Why This is a great VR game for Seniors: Tai chi is a gentle exercise that helps seniors improve balance and prevent falls. It consists of making slow, graceful movements while breathing deeply. VR Tai Chi offers these same benefits in beautiful locations.

Check out the Full Review here – <https://www.worldofgeekstuff.com/guided-tai-chi-vr-review/>

**Spacefolk** **City**

Spacefolk city is a fun and casual take on city-building simulation games. You create a colorful and funky city that is floating in space and filled with buildings, funny decorations, and your little Spacefolk citizens. Try and make them happy and complete the goals of each level to advance.

Why This is a great VR game for Seniors: Spacefolk city is a whimsical city-building game. The controls are a little more complicated on this game than other games on this list, but once mastered Spacefolk City can allow for endless hours of creating colorful and fun cities of spacefolk while using your brain.

Check out the Full Review here – <https://www.worldofgeekstuff.com/spacefolk-city-review/>

**Puzzle Bobble 3D Vacation Odyssey**

Puzzle Bobble 3D Vacation Odyssey takes the old-school bubble popping duo from Bubble Bobble, hands you a bubble cannon which you use as a sort of bow, and then you take aim to pop those bubbles!

Puzzle Bobble VR Vacation Odyssey Launch Announcement Trailer Oculus Quest Platform - 10 Best VR Games for Seniors and ElderlyPBVR Lake - 10 Best VR Games for Seniors and Elderlyinfinite mode.jpg - 10 Best VR Games for Seniors and Elderly

Why This is a great VR game for Seniors: Puzzle Bobble 3D is a familiar match 3 game concept. Shoot your bow to match up and pop bubbles. This is a great mental workout while also getting a small amount of physical activity in.

Check out the Full Review here – <https://www.worldofgeekstuff.com/puzzle-bobble-3d-vacation-odyssey-review/>

**Beat Saber**

Beat Saber is a VR rhythm game where you slash cubes as they float towards you in time to the music. Although the concept is pretty simple it can take a while to master the game and beat those higher levels.

Why This is a great VR game for Seniors: Beat Saber is usually the first game most people play when they get a VR headset. It’s also the first game most people show someone else in VR. It’s a simple enough concept that most people can pick it up and play, while still getting the experience of VR. All of these things make it popular with seniors. Some may not enjoy the music though.

Check out the Full Review here – <https://www.worldofgeekstuff.com/beat-saber-review-number-1-vr-rhythm-game/>

**Wander**

Wander VR allows you to wander the world openly through the magic of VR. From the comfort of your living room you can teleport almost anywhere in the world – whether you wish to walk across the London Bridge, stroll the gardens of the Taj Mahal, or witness the enormity of the Great Pyramids of Egypt – unlimited exploration awaits!

Why This is a great VR game for Seniors: For those seniors who still want to explore the world even though they may no longer feel they can, Wander allows you to explore the planet with a few buttons clicks. Visit inside museums, famous landmarks or where you grew up easily.

**First Steps**

Why This is a great VR game for Seniors: This is a helpful starting point for anyone who is new to VR to get use to the controllers and being in a virtual world. There are a few fun toys to interact with at the end of the experience like paper airplanes and bouncy balls. If the senior in your life wants to try VR, start here. It’s free! Best VR games for elderly players.

**Almost any game….**

It should of course be said that after getting a little familiar with the VR headset, pretty much ANY game available can be enjoyed by seniors and elderly players. It can take a bit to get familiar with controls and the virtual environment, but once comfortable many seniors have zero issues using VR to play or experience any VR game. Explore many of the countless genres of games available in VR from shooters to solving puzzles to painting. Check out over 100 VR games we have reviewed on World of Geek Stuff here.

**Final Thoughts on 10 Best VR Games for Seniors and Elderly**

There are lots of great games for seniors to play and enjoy on the Oculus Quest 2. We have listed our 10 Best VR Games for Seniors and Elderly here to get started, but as mentioned, almost any VR game can be played by seniors once they are comfortable.

***SOURCE:*** <https://www.worldofgeekstuff.com/10-best-vr-games-for-seniors-and-elderly/>