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2024

Wunderfall's PersonEx

Autumn Ford

Johanna Wunder

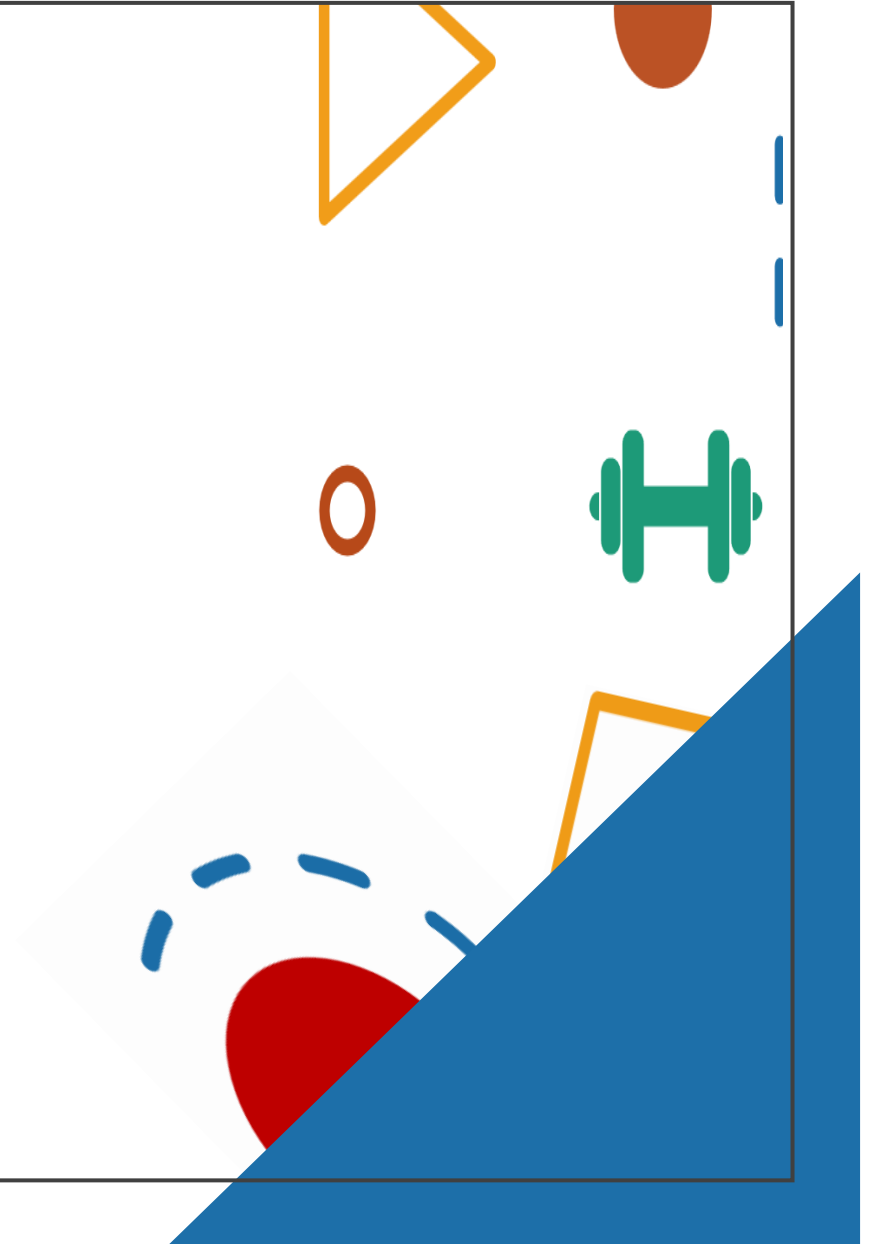
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Physioasis

Autumn Ford and
Johanna Wunder



OVERVIEW

- An adaptable home gym that she is able to use on her own terms
- Key components include:
 - full-length mirror
 - Space for handheld weights
 - iPad stand
- Used for both right and left-side work outs
- The home gym would be placed in a 5x4 ft space within the home
 - Key spot in the home, so everything must be on wheels
 - Out of sight out of mind
- Bright colors overall and clear distinctions between the weights

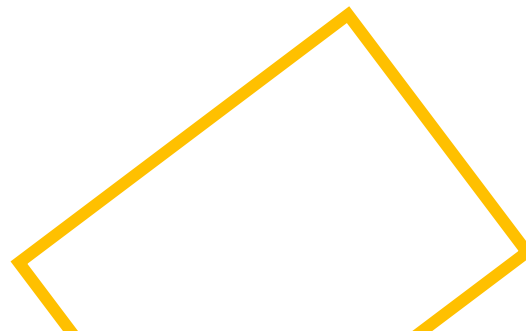


CLIENT INFO

- Our patient is a 60-year-old woman who was diagnosed with Latent Autoimmune Diabetes in Adults (LADA)₂
- Bilateral BKA (below the knee) lower extremity amputee and has some minor visual impairments
- Independent with ADL's and most IADL's
 - ADL stands for activities of daily living
 - Basic self-care tasks
 - Bathing
 - Dressing
 - IADLs are instrumental activities of daily living which as
 - Tasks you do every day to take care of yourself and your home
 - Grocery shopping
 - Cooking meals

CLIENT INFO

- Enjoys working out and swimming at the YMCA, being outside, and gardening
 - Spending time with her grandchildren
- Difficult for her to get to the gym
 - Has become reliant on her family's work schedules
- Risk of infection when it comes to
 - Public gyms
 - Swimming pools
 - Close contact with others

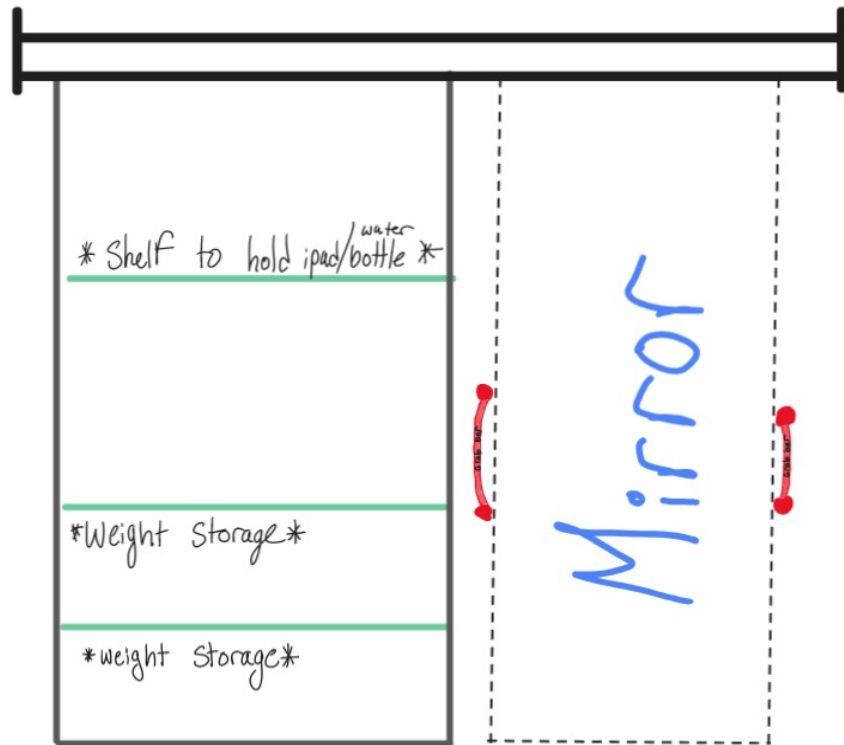


Design process

- What is adaptive exercise?
 - A form of specialized training that is specific to individuals with disabilities₁
 - Meet the needs of a specific individual
- What ours?
 - An adaptable home gym
 - Utilizing both wheelchair and standing workouts
 - Used independently



Progress



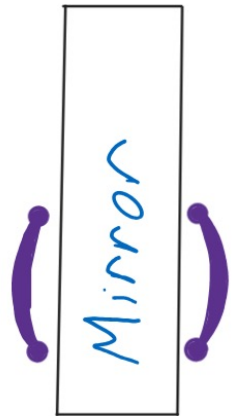
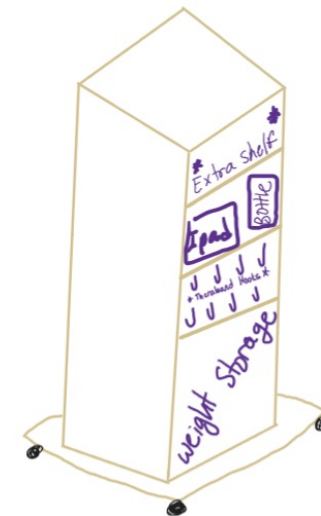
Prelim Design Concept 1

- Stationary barn door with shelving to house an iPad, TheraBand's, dumbbell weights, and a water bottle
- Mirror will be placed onto wall with grab bars on each side

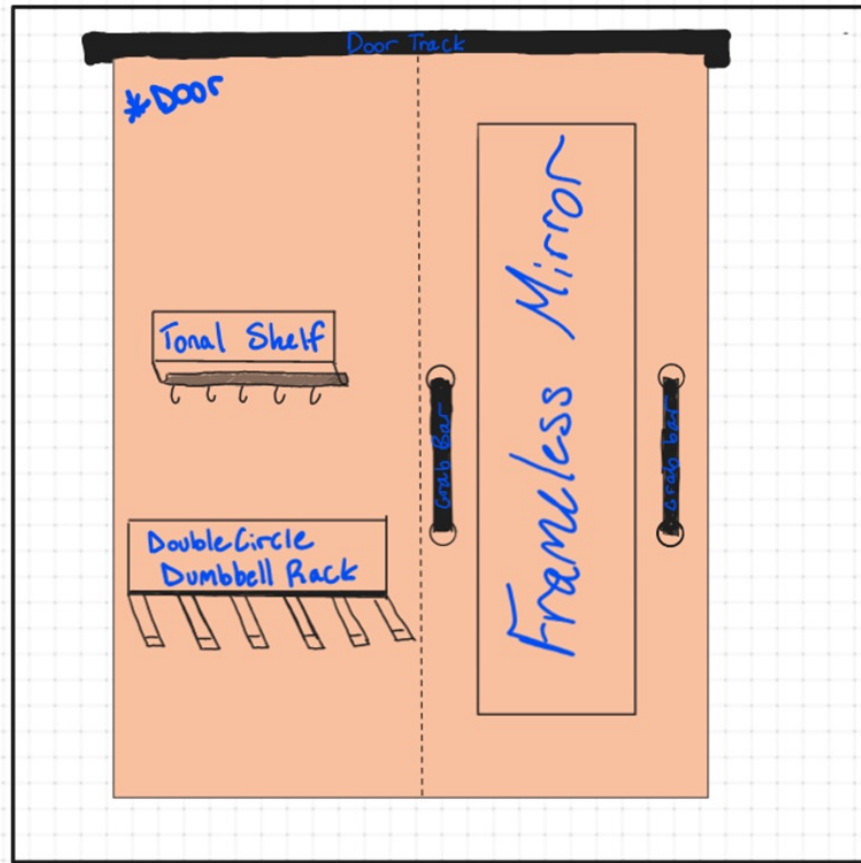
Prelim Design Concept 2



- Portable cart that will hold all items: iPad, TheraBand's, dumbbell weights, and a water bottle
- Mirror will be in a stationary place with grab bars

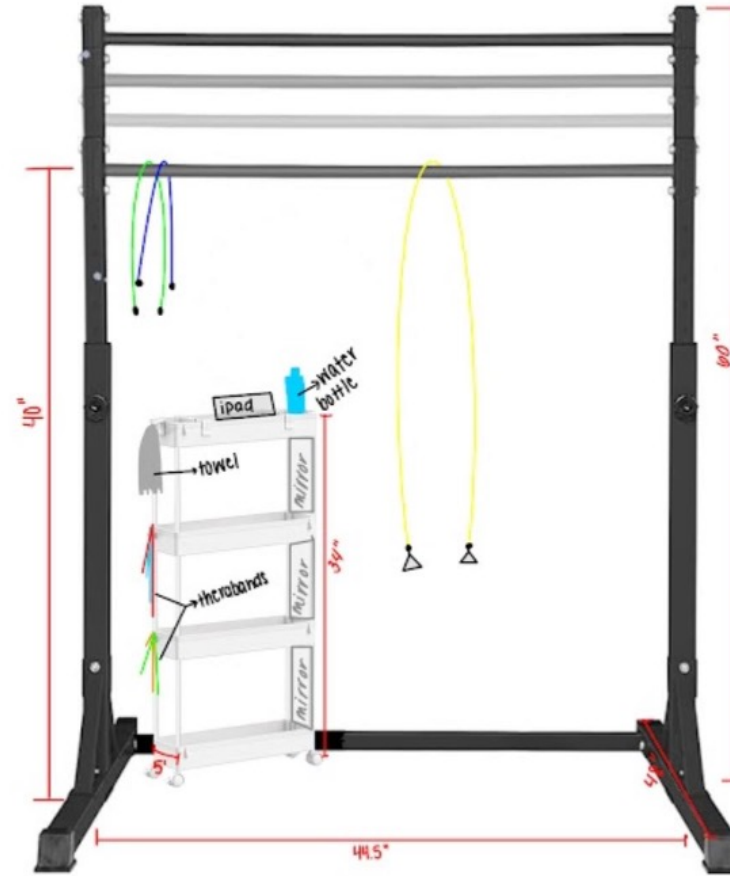


Final Options



Barn Door Option

- All necessary equipment such as dumbbell rack(s), an iPad stand, water bottle and TheraBand holders will be stationary
- Cover the wall when not in use



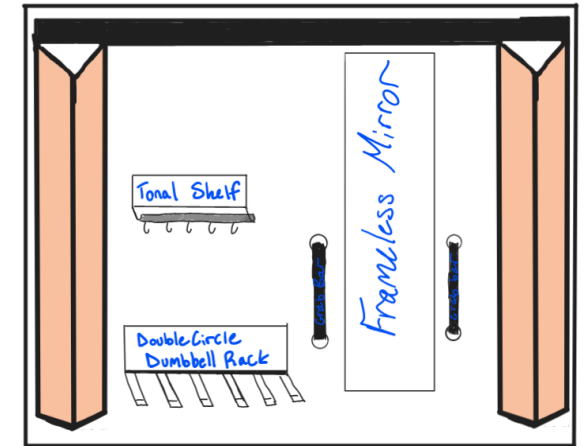
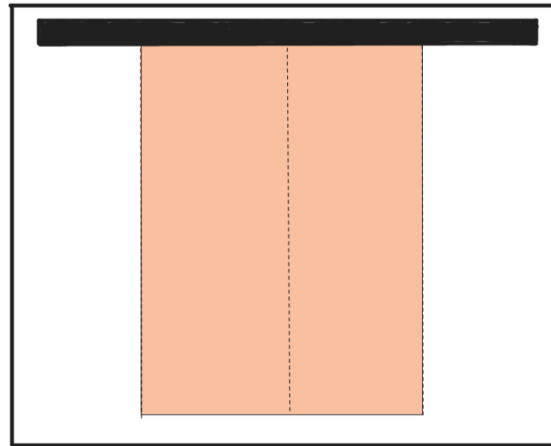
Free-Standing Option

- All necessary equipment such as dumbbell rack(s), an iPad stand, water bottle and TheraBand holders will be stationary
- Cover the wall when not in use

Future Plans

Option 1:

- Completely stuck to wall
 - Anchored to the wall
 - Easily hidden by bifold barn doors



Option 2:

- Independent and easily mobile
 - Wheel locking mechanism
 - Sturdy and Lightweight



References

1. “Adaptive Fitness Training Model: What Is It?” *Certify Strong Education*, www.certifystrong.com/adaptive-fitness-training-model-what-is-it/#:~:text=Adaptive%20fitness%20is%20a%20form,on%20what%20disability%20they%20have. Accessed 8 Mar. 2024.
2. Pozzilli, Paolo, and Silvia Pieralice. “Latent Autoimmune Diabetes in Adults: Current Status and New Horizons.” *Endocrinology and Metabolism (Seoul, Korea)*, U.S. National Library of Medicine, June 2018, www.ncbi.nlm.nih.gov/pmc/articles/PMC6021307/#:~:text=Epidemiological%20studies%20show%20that%20LADA,in%20adult%20population%20%5B20%5D.
3. Brahmikshatriya, Priyanka P, et al. “Characteristics and Prevalence of Latent Autoimmune Diabetes in Adults (LADA).” *ISRN Pharmacology*, U.S. National Library of Medicine, 2012, www.ncbi.nlm.nih.gov/pmc/articles/PMC3339117/#:~:text=About%2020%25%20of%20the%20patients,antibodies%20in%20adult%20onset%20diabetes.