

How Engaging Content can Aid Rehabilitation and Reduce Pain

Ivan Phelan

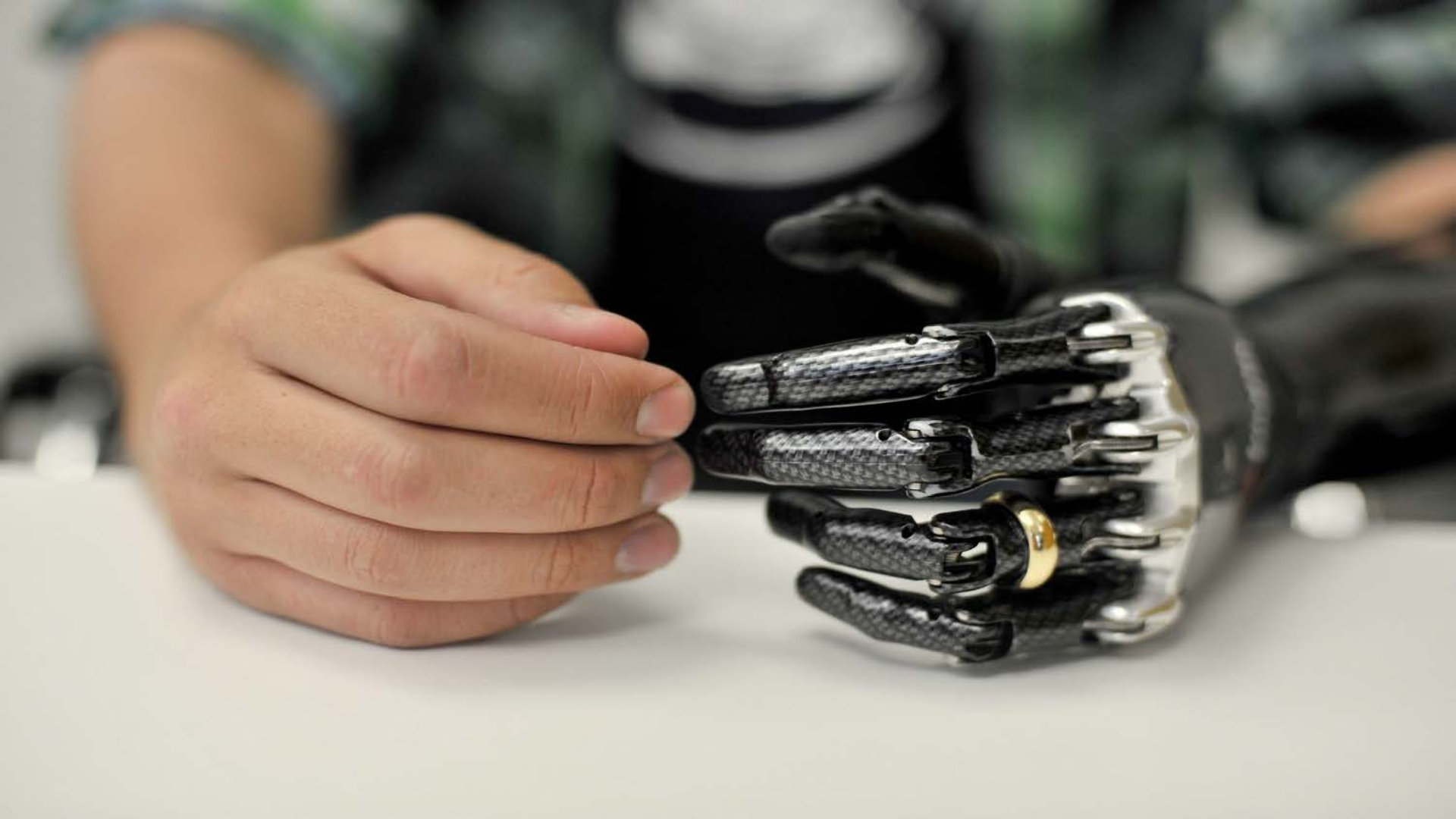


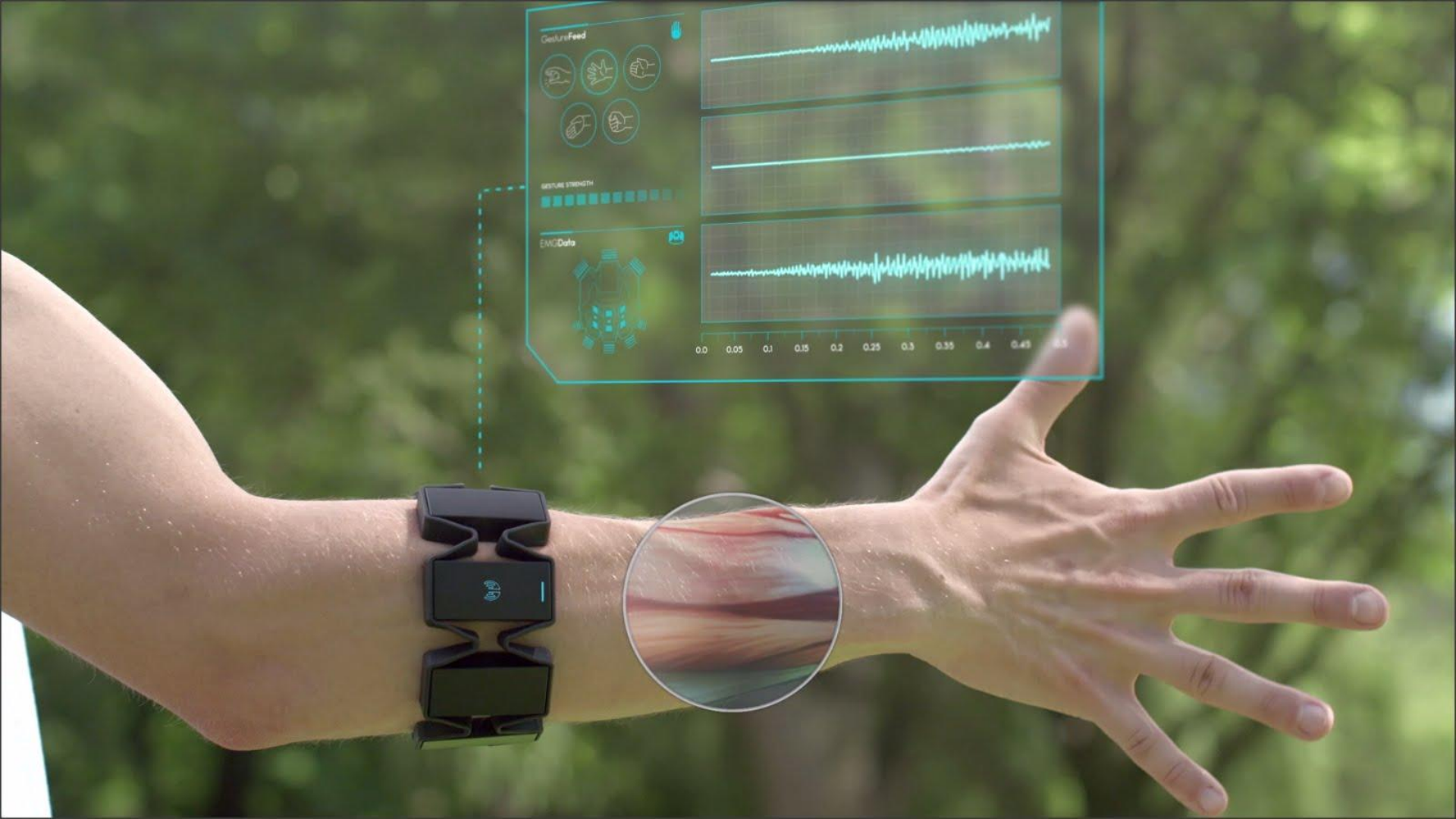
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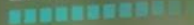




GestureFeed



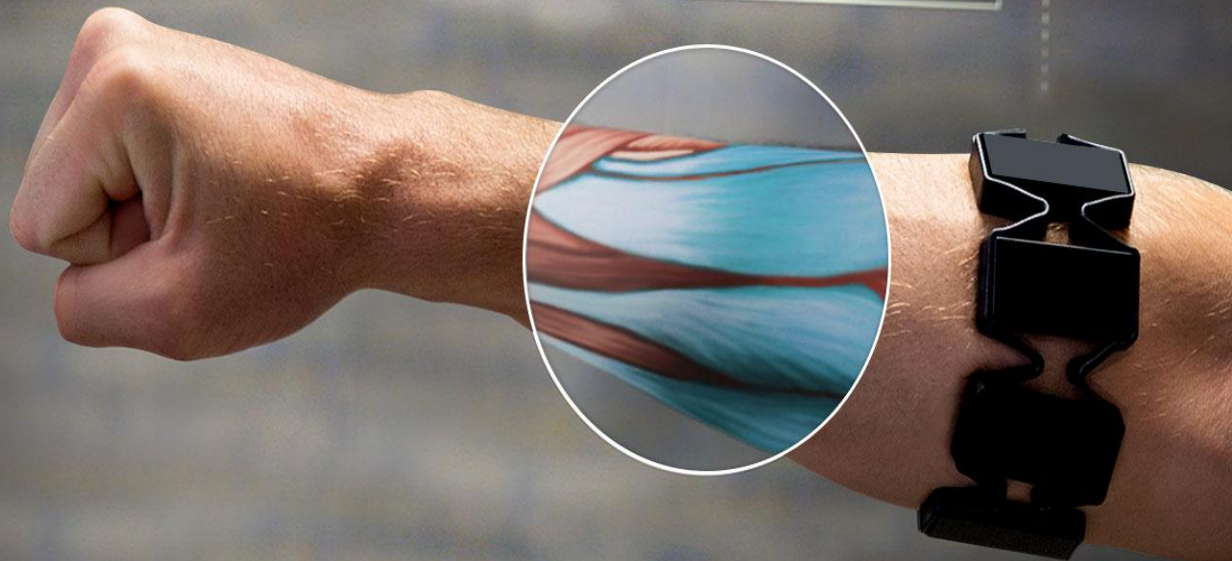
Gesture Strength



EMG Data



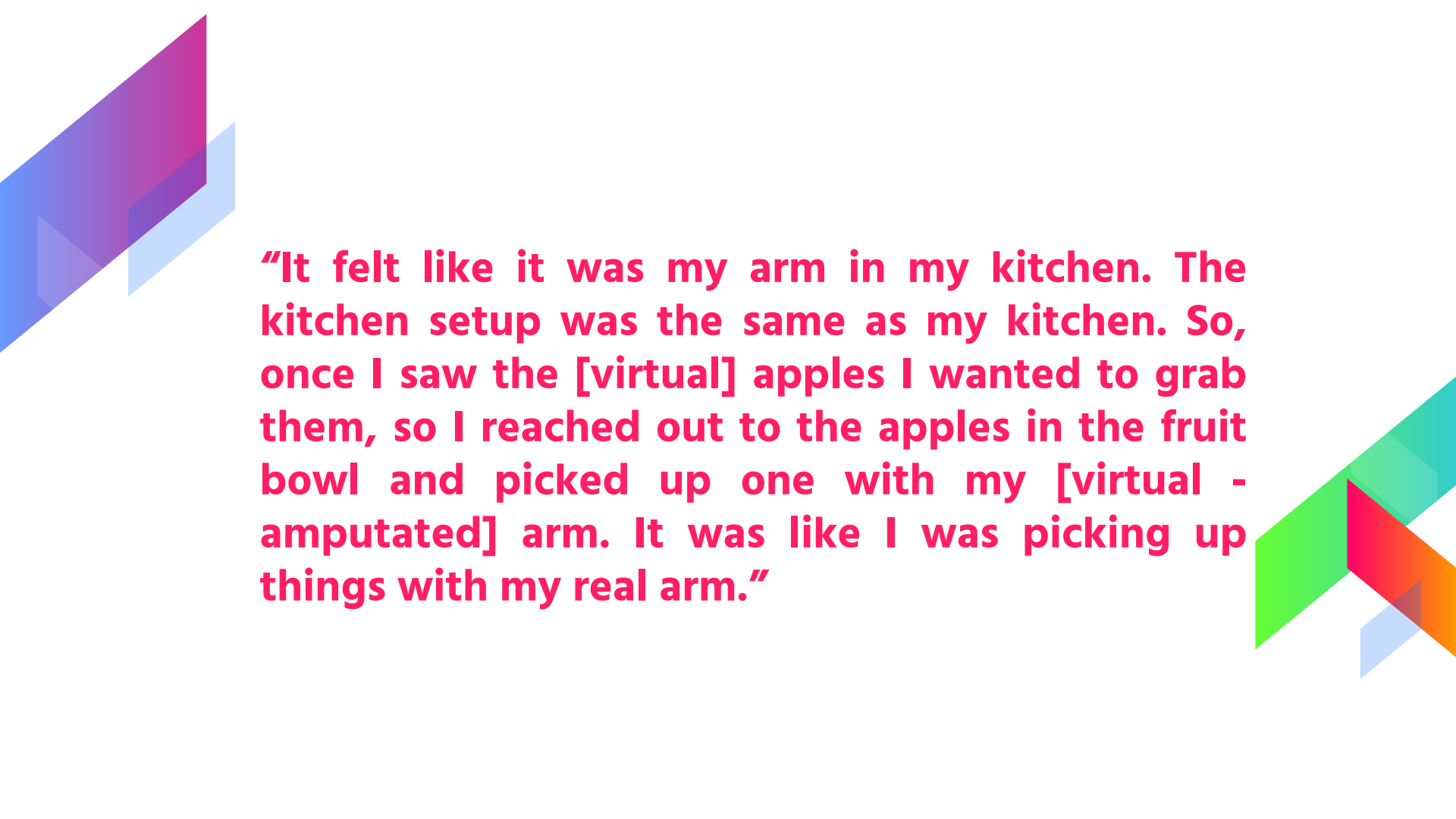
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"It felt like it was my arm in my kitchen. The kitchen setup was the same as my kitchen. So, once I saw the [virtual] apples I wanted to grab them, so I reached out to the apples in the fruit bowl and picked up one with my [virtual - amputated] arm. It was like I was picking up things with my real arm."

The image features two decorative geometric compositions. The top-left corner is filled with overlapping translucent shapes in shades of blue, purple, and magenta. The bottom-right corner features a similar composition with overlapping translucent shapes in shades of green, red, orange, and light blue. The central area of the image is white and contains a single line of text in a bold, magenta font.

“I was surprised, it’s the first time I’ve ever done anything like that... Now after seeing what I have seen there I could have operated one. First time I’ve ever done it like, first time I’d had one of these sort of arms.”



**“Brilliant, brilliant...it were
absolutely brilliant ...I give it 10 out
of 10 what you've done”**



Virtual reality helps amputees





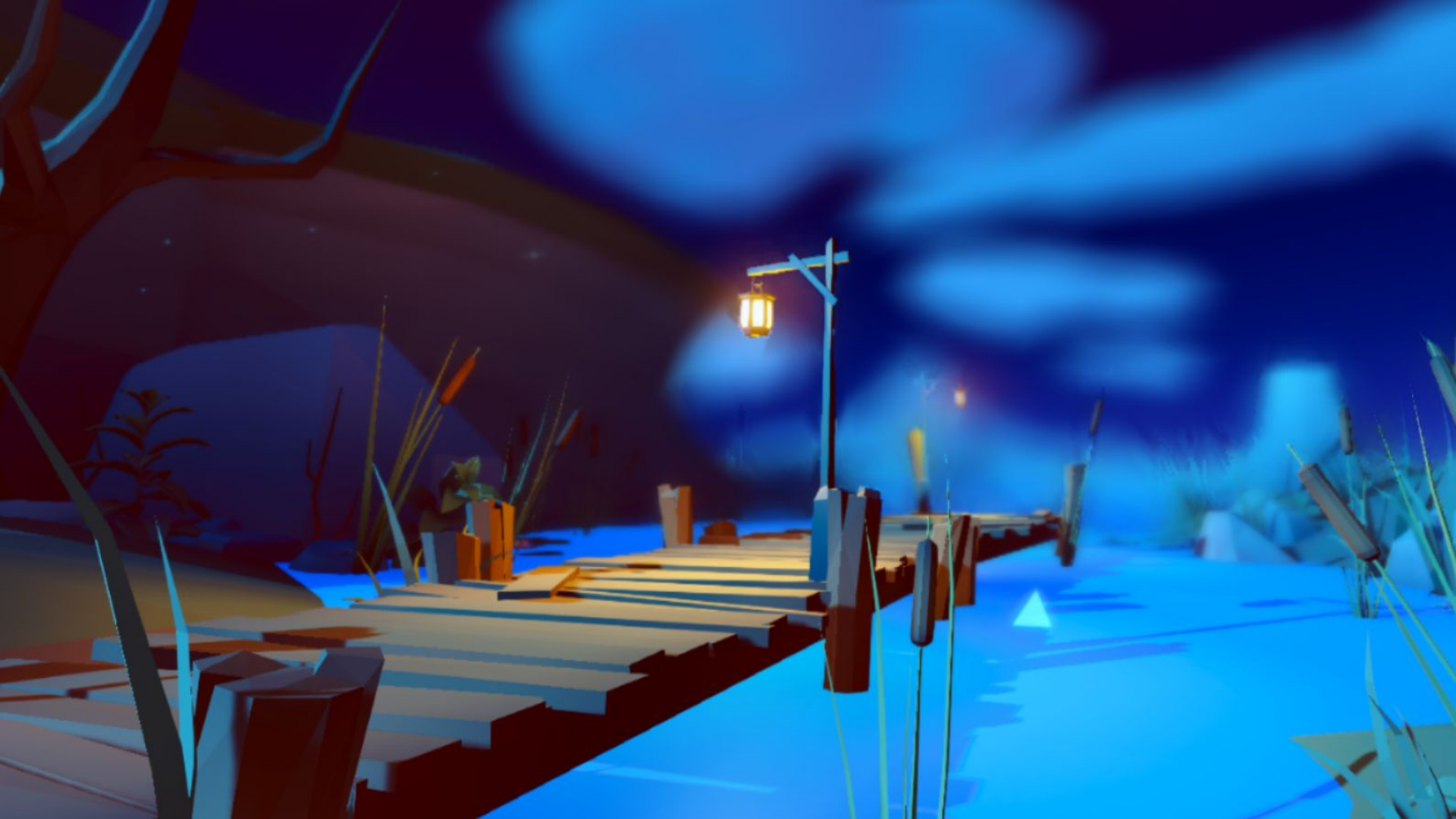


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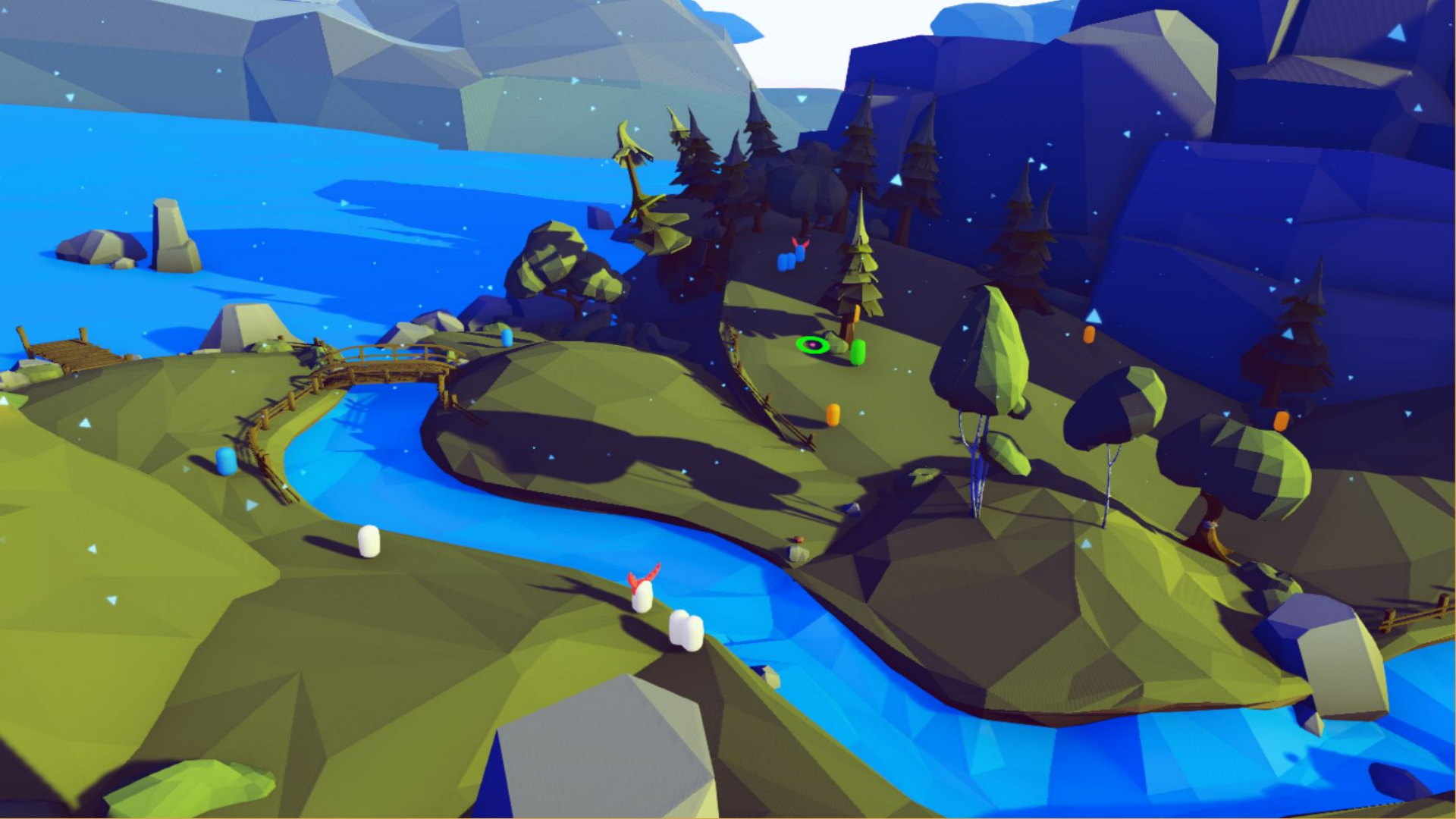




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**Patients suffer pain
during arm and hand
rehab, low engagement
and more time in clinic**





**Develop an effective,
engaging and user
friendly VR rehab
system for adult &
paediatric patients**













**It's much easier... because it
felt like I didn't have an
injury, so it felt like I could
just do it.....**



- 
- 
1. Reduce pain
 2. Faster Healing
 3. Reduce visits
 4. Waiting times
 5. Real-time control
 6. Adherence















**When he's back from school,
every day he's taking... "Come
on mum, I'm ready for the
video".**






**The range of movements
seemed to be a lot more fluent.
It was just like, it was a natural
reaction to just do that, and the
movement was just better than
it would be if you hadn't had it
[VR headset] on.**






**You didn't feel like you were
doing physio. It just felt like
you were playing a game.**










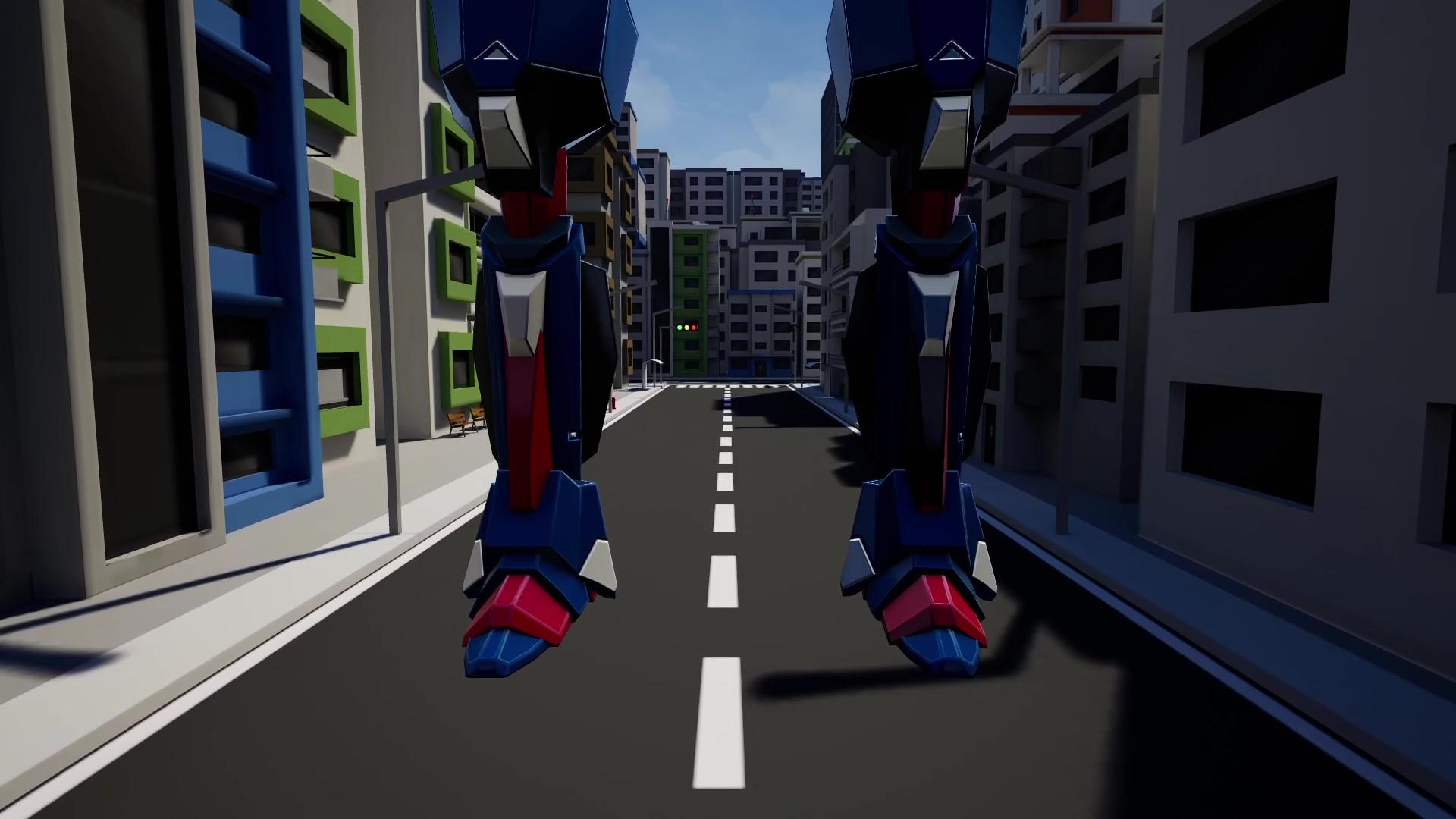
**Rehab can be
painful, uncomfortable,
and tedious, reducing
compliance.**





**Use VR as a tool in
physiotherapy for
children after lower limb
or knee surgery.**















**It made me want to do it
more because it was more
fun and easier**





**It made it more accessible,
a lot easier. Because it's
when I was trying to walk
with it, I was like on my
tiptoes. But when I was
doing it with VR, I could put
my whole foot down and
not be scared**



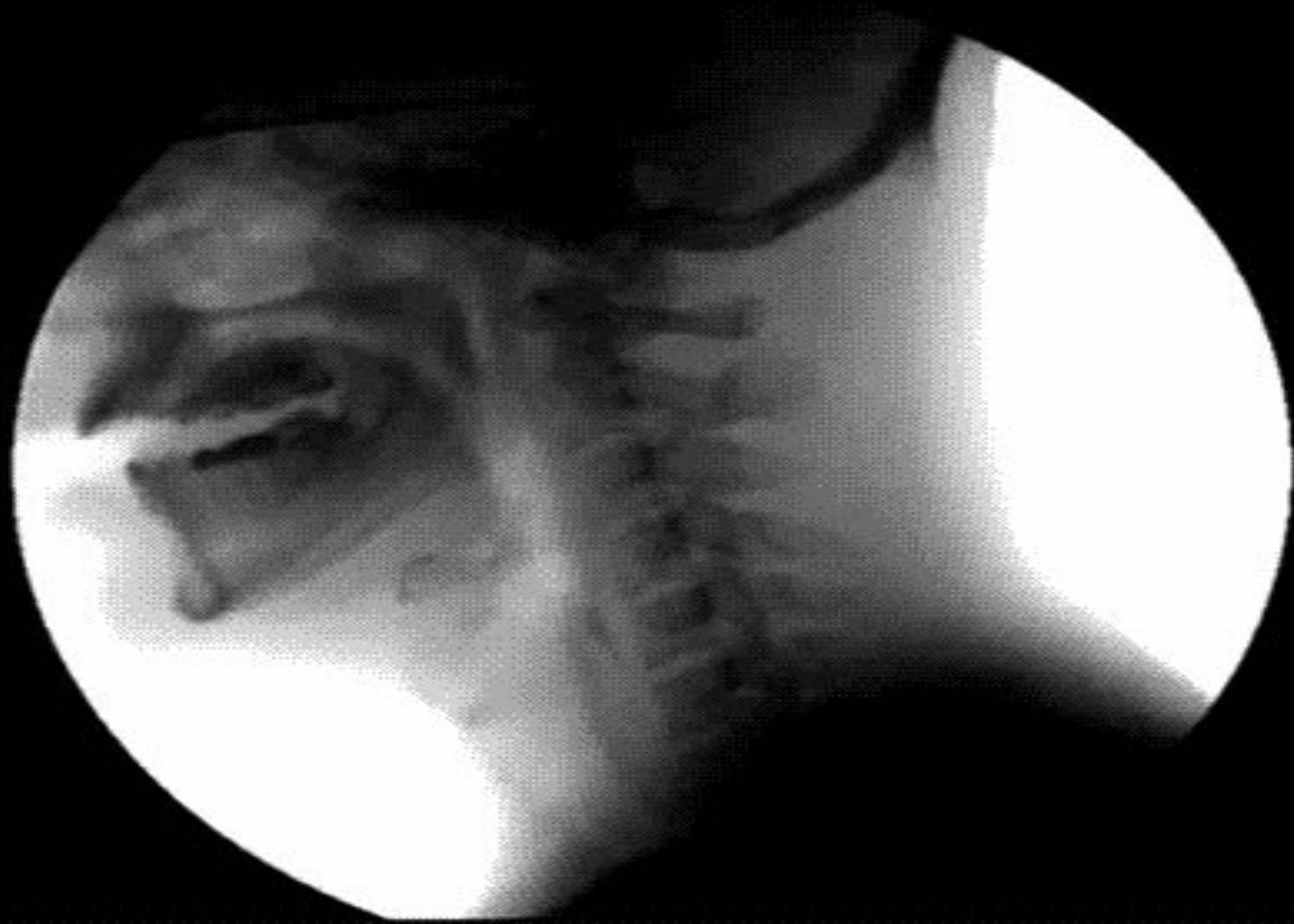


**I didn't realise how I walked
in that far until I took it off**

















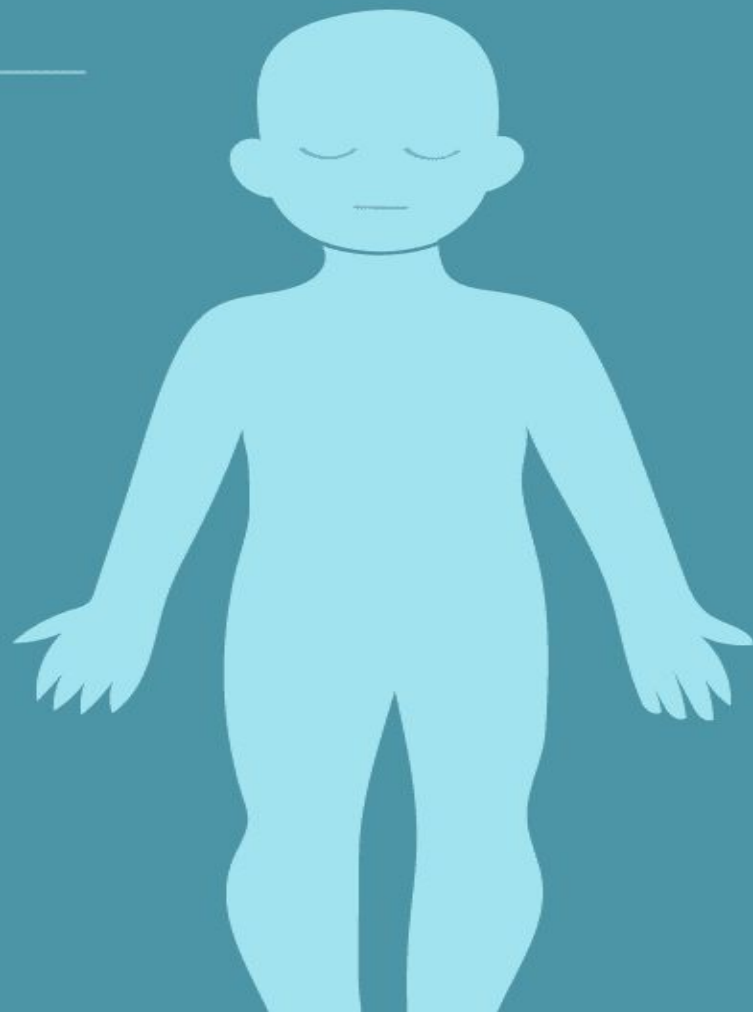




**progressive
muscle
weakness**



**difficulty
controlling
movement**

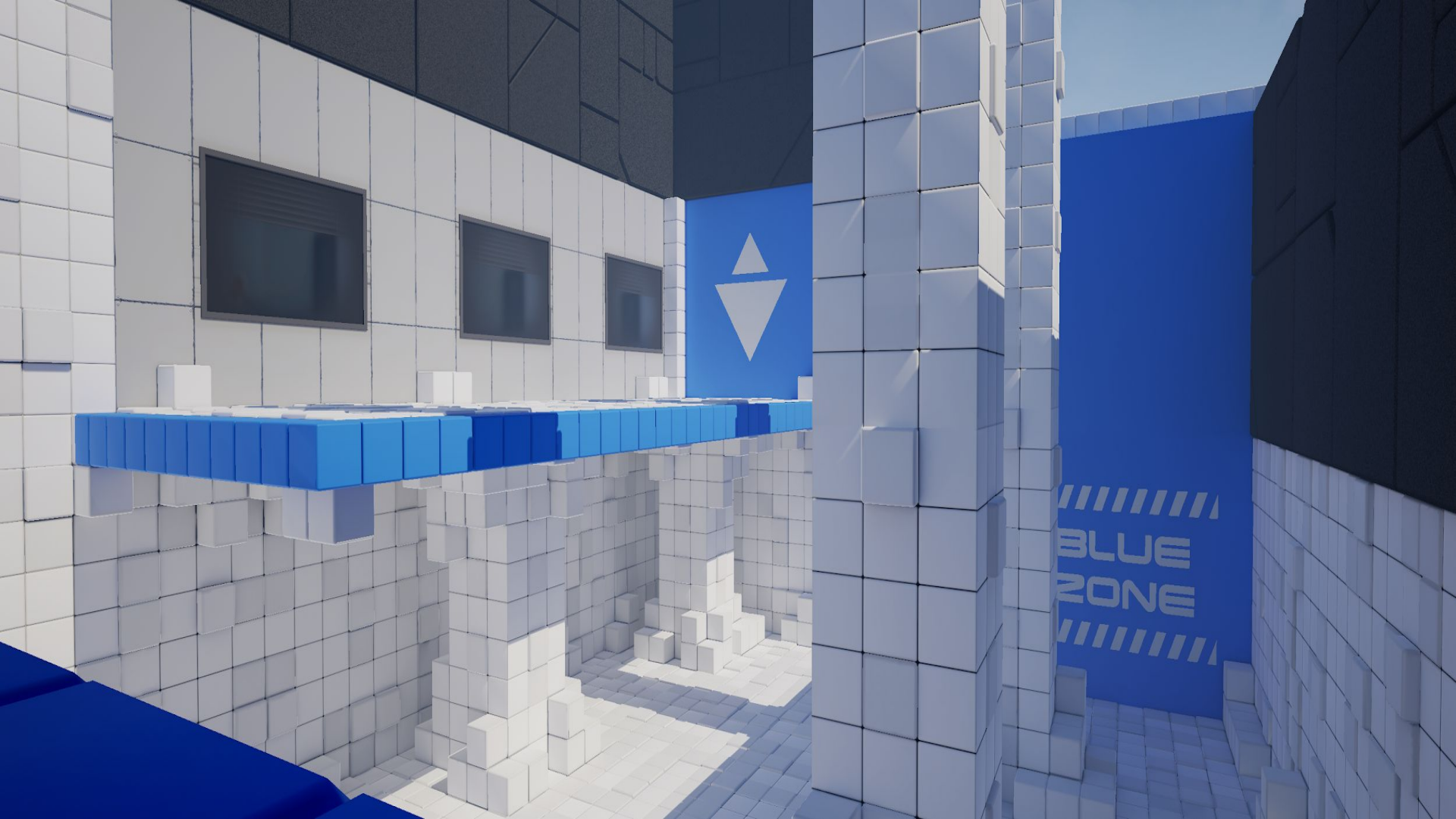




**Children with DMD need
to do daily stretching, low
adherence, poor
long-term prognosis**







MISSION REWARDS!

Level 7 Loot





Questions!

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