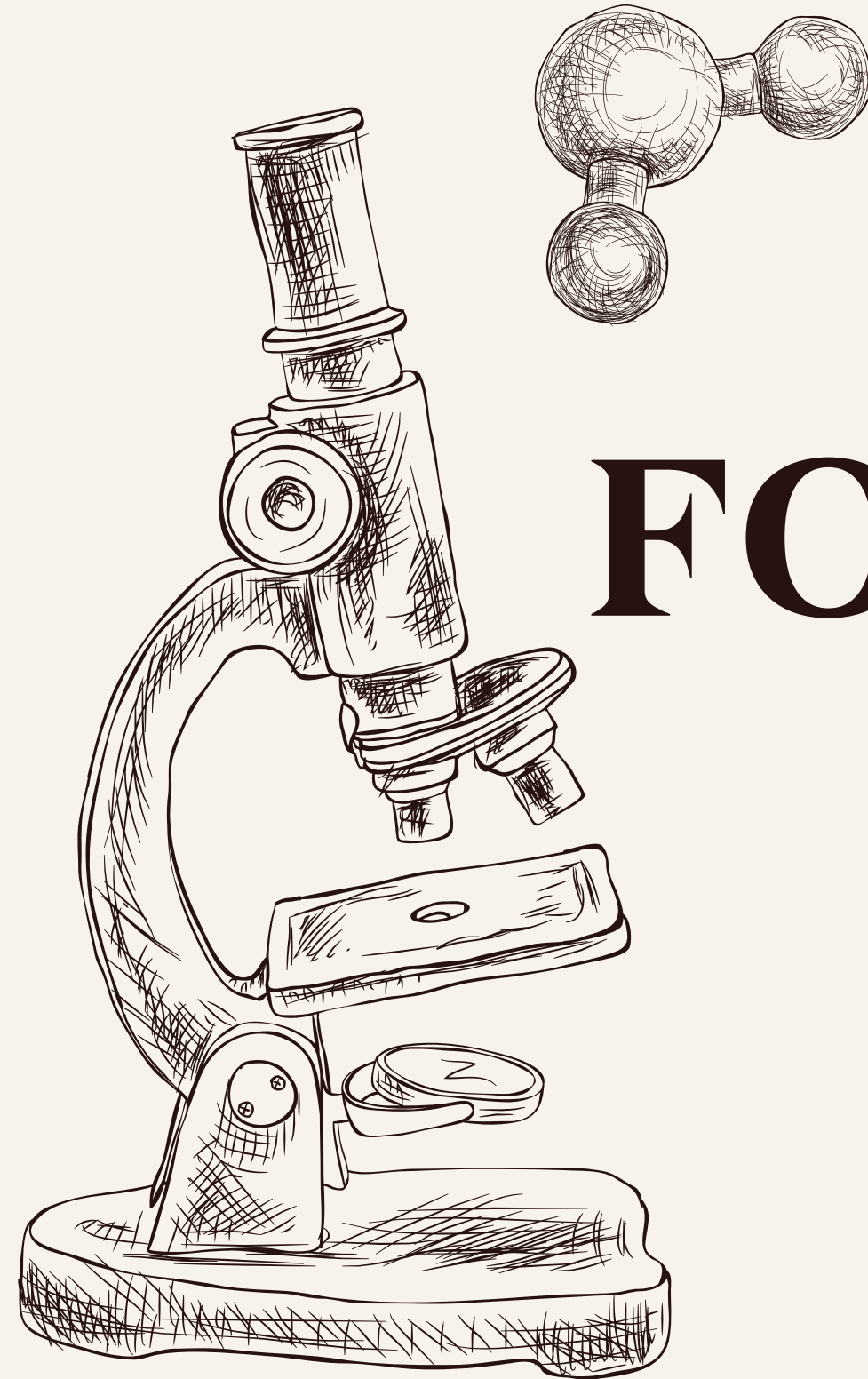
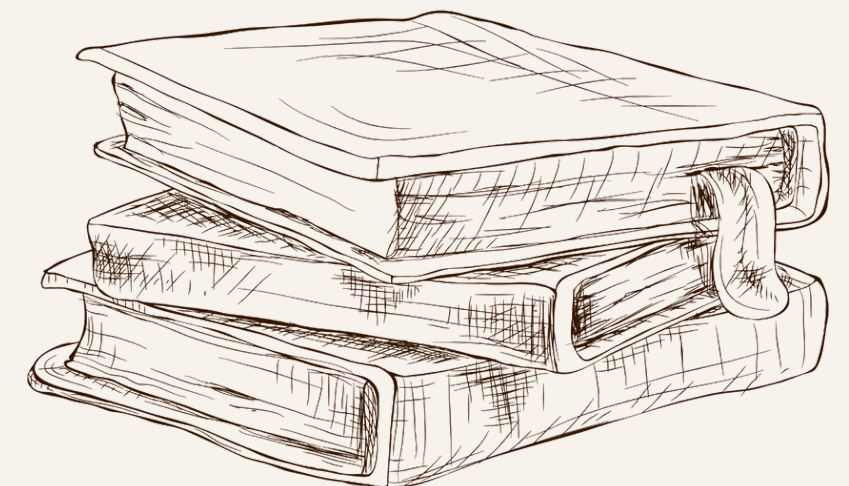
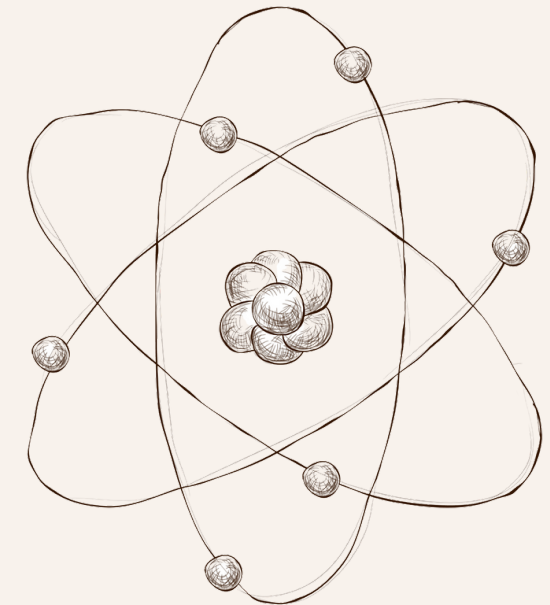
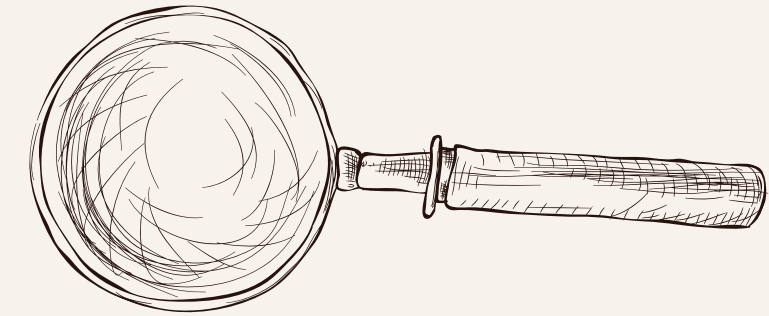


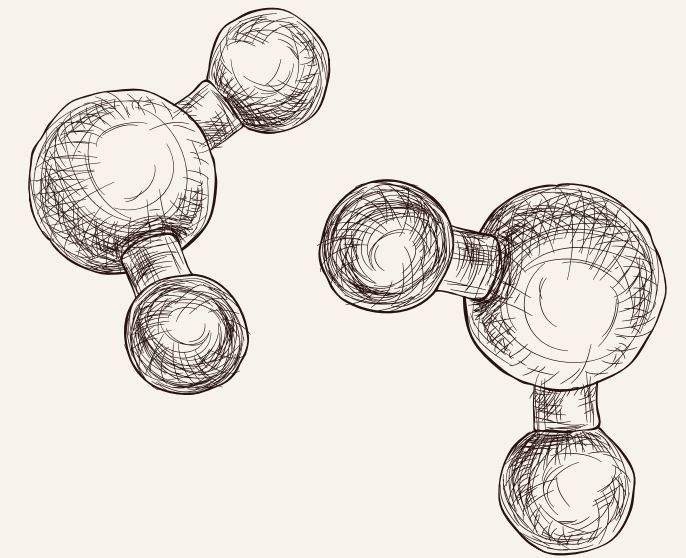


MedSprint:
Innovations for Life after Stroke

FOUR-STROKE DESIGNS

Presented by
Saad, Sadra, Aidan, and Holden





The Research

01

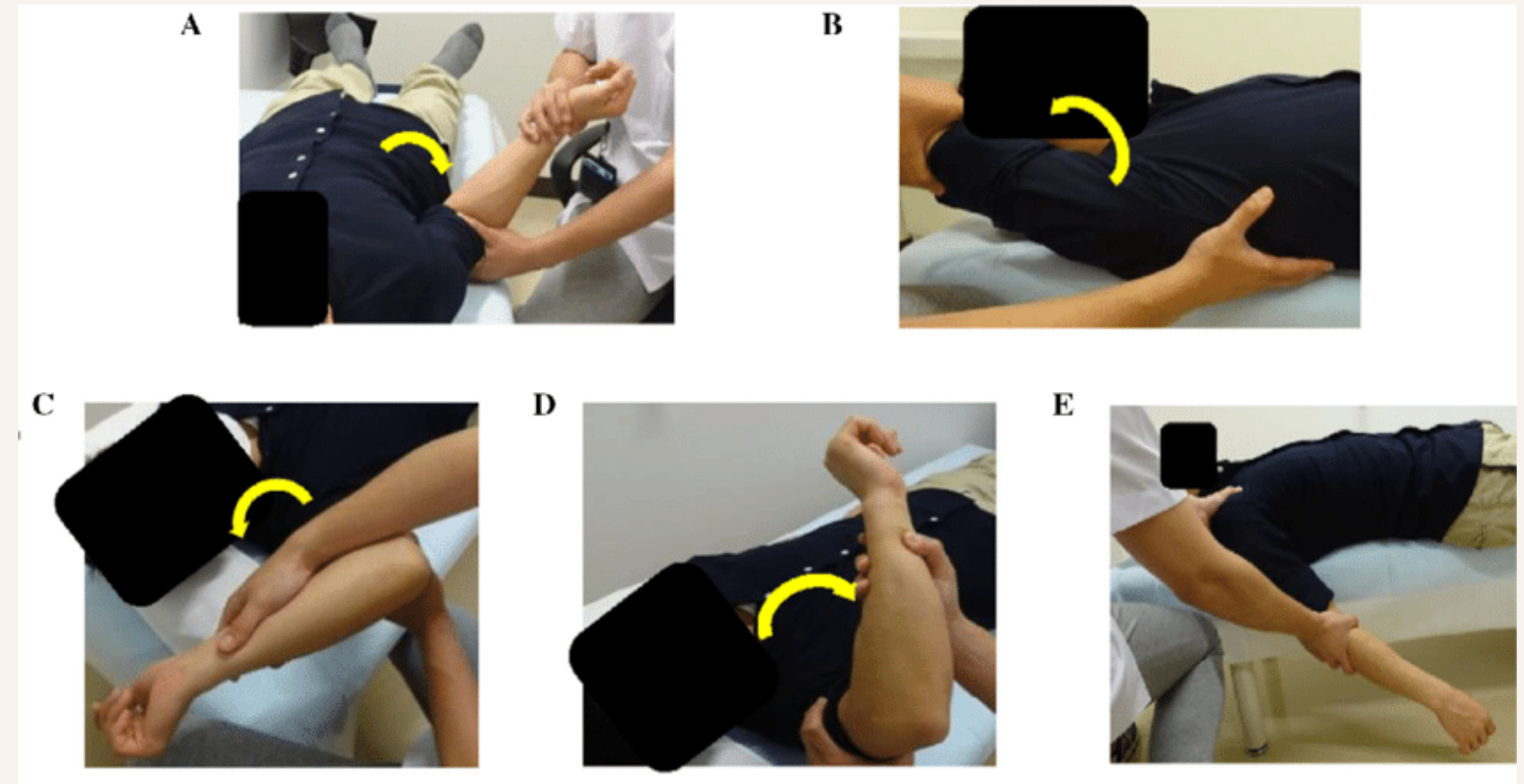
Around 80% of Stroke survivors experience movement restrictions including arm mobility.

02

Affects to mobility include spasticity and contracture which over time tighten and shorten muscles.

Current Practices

- Physiotherapists currently apply manual manipulation of limbs to work them through their maximum ROM
- This keeps the limb mobile, induces a stretch, and encourages rehabilitation of natural ROM.



Key Pain Points

01

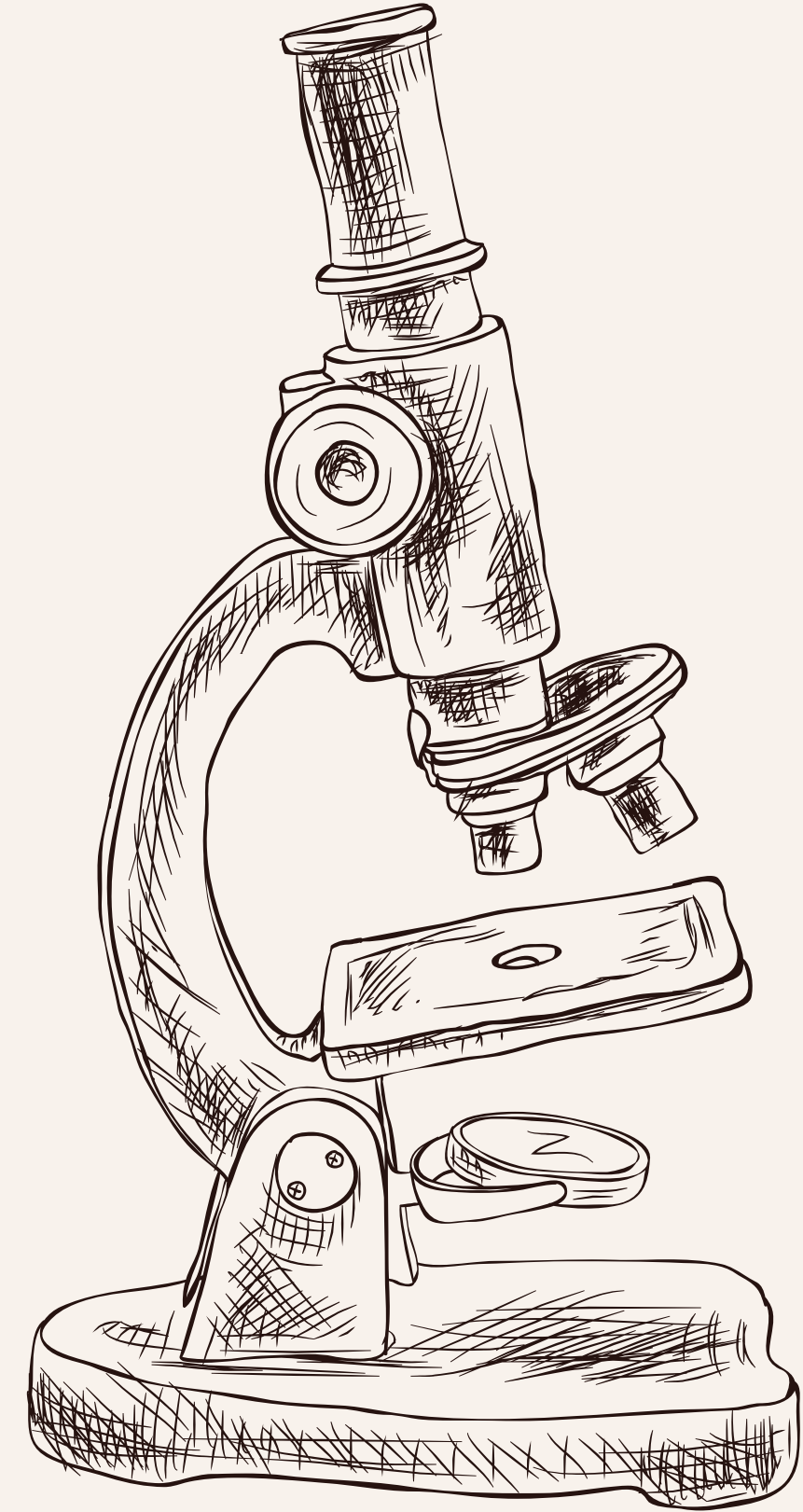
Lack of affordable and accessible physiotherapy options for arm mobility.

02

Unsatisfactory frequency of training given lack of healthcare resources.

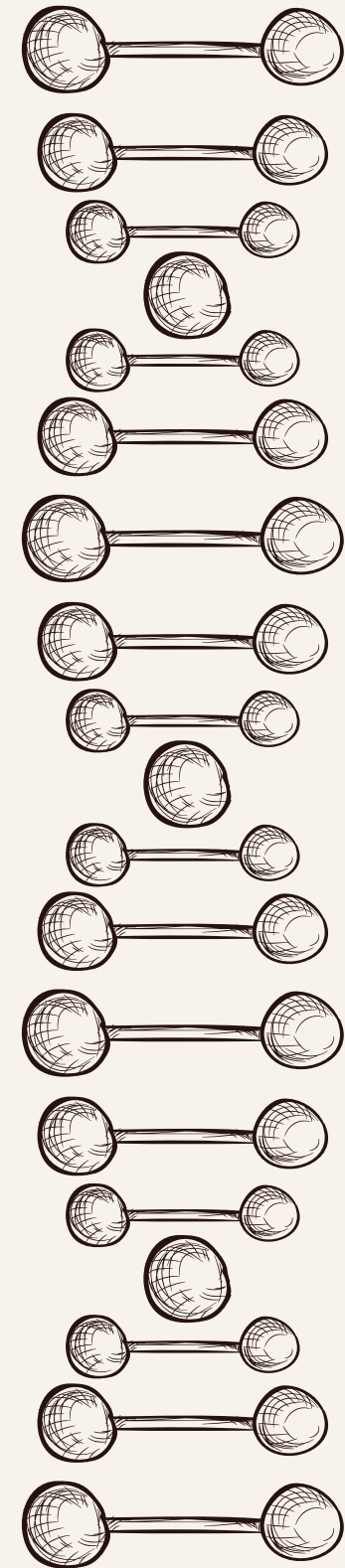
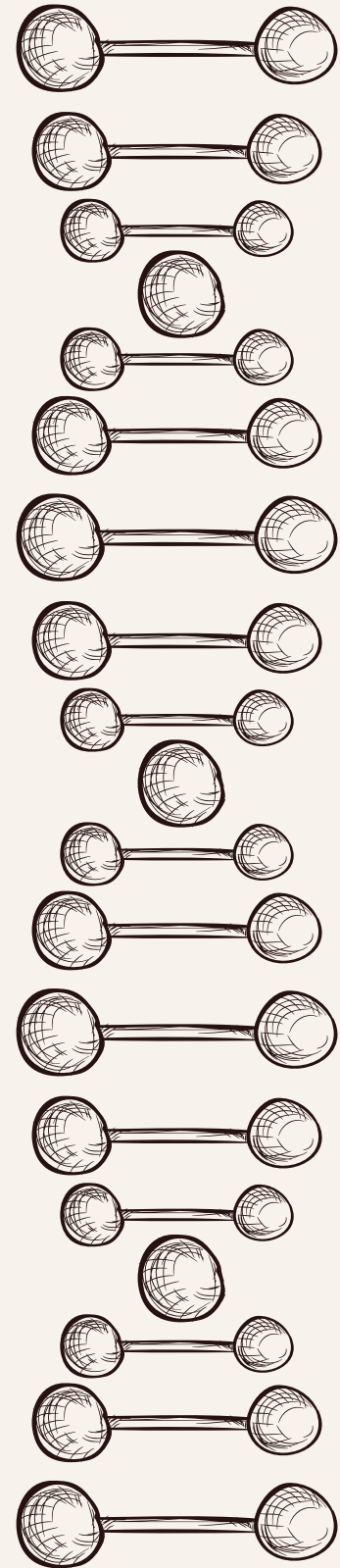
03

Autonomy is an important value for the client and their efforts toward physio must be empowering.



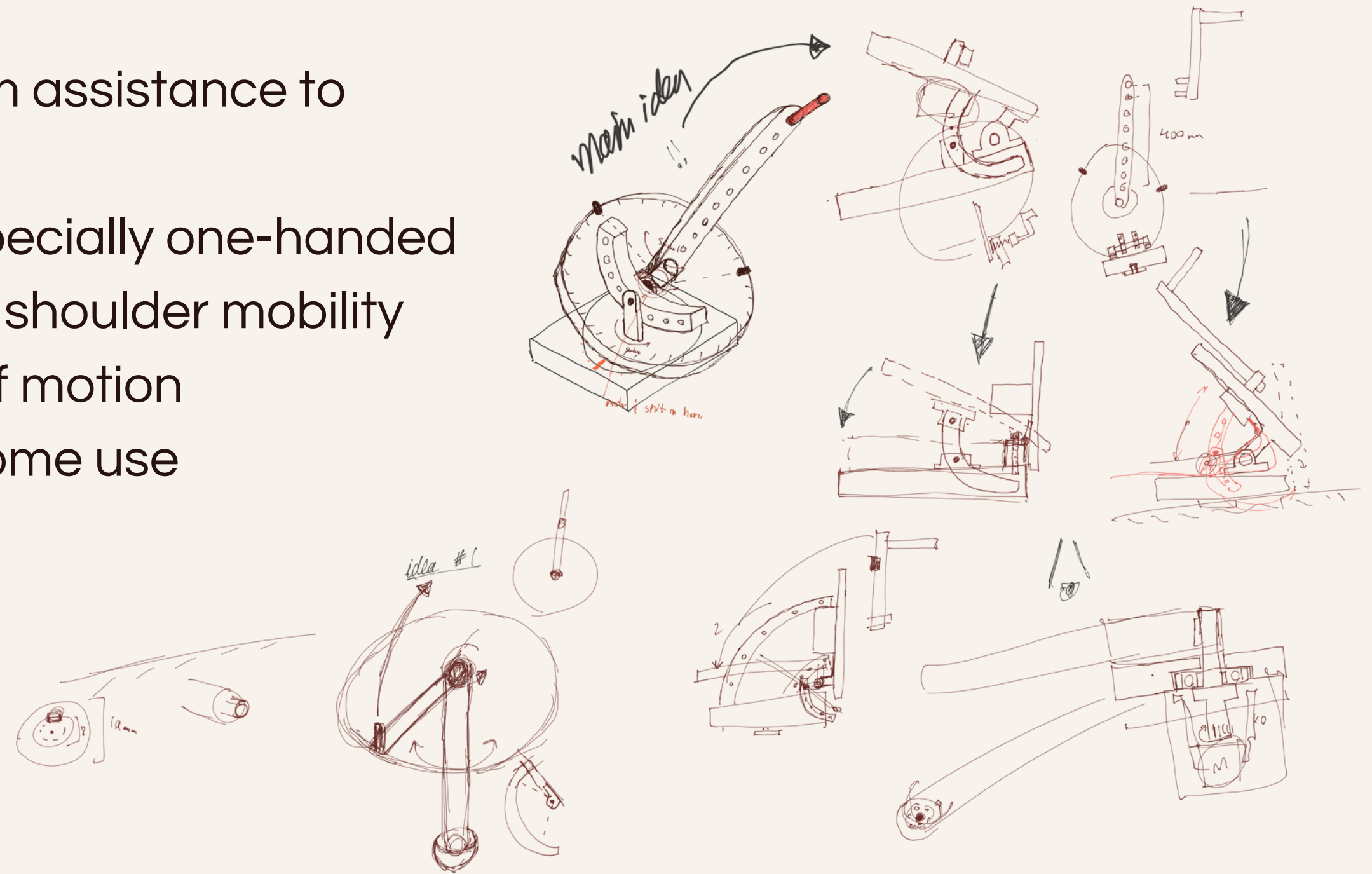
Refined Problem

Developing a means of providing user-operated, at-home mobility training via movement simulation across the shoulder and elbow joints. Ensuring safe, and effective useability across multi-axis movement.



Concept Development

- Wanted a progression from assistance to resistance
- Easy to install and use, especially one-handed
- Usable for both elbow and shoulder mobility
- Adjustable tilt and range of motion
- Safe and convenient for home use



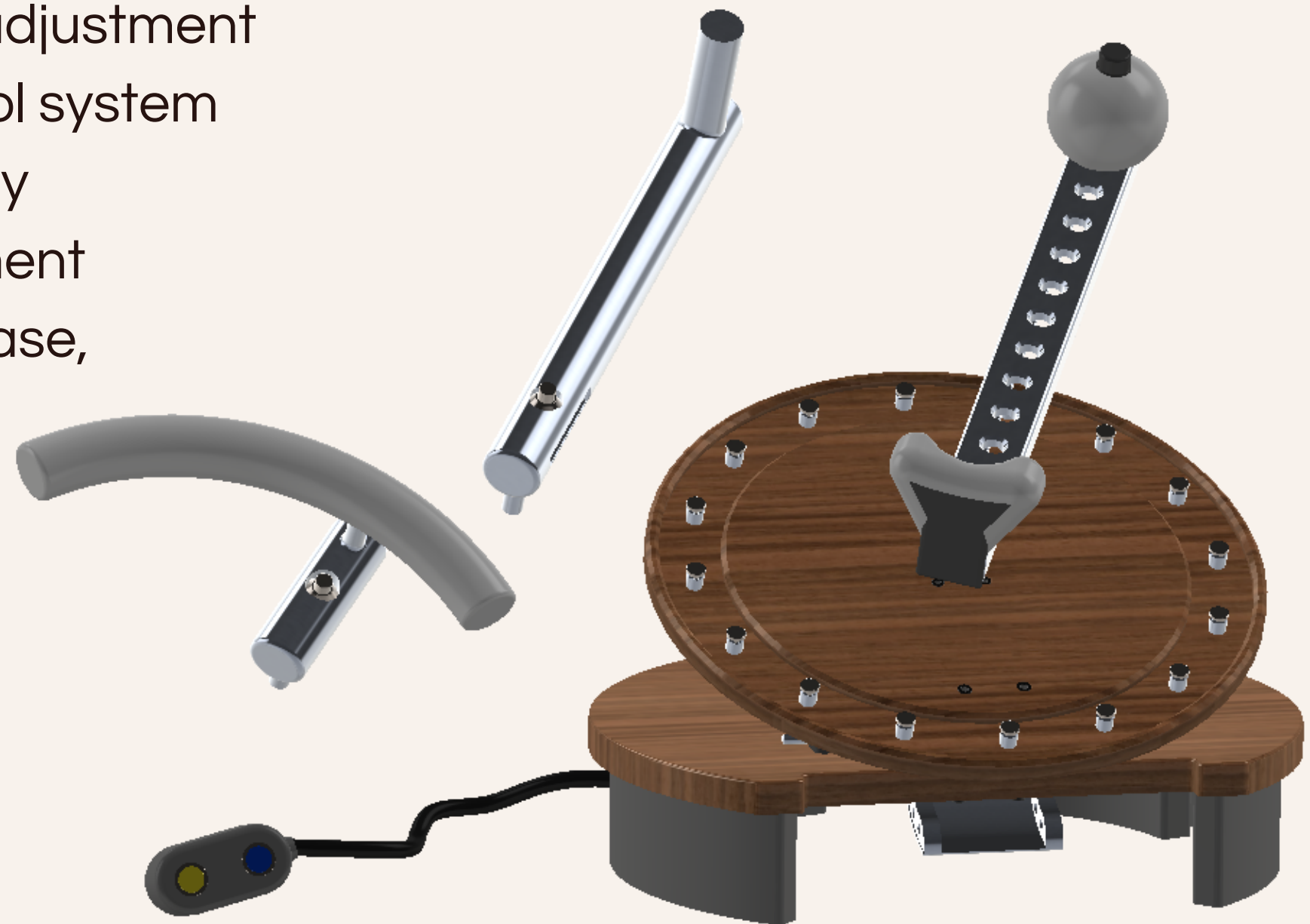
The Product



An at-home, affordable, easy-to-use arm and shoulder mobilization training device.

The Model

- Exercise equipment-inspired assembly
- Designed for one-handed set-up and adjustment
- Single DC motor and two-button control system for the mobilization of the disc assembly
- Friction pivot and pin for angle adjustment
- Aluminum components and wooden base, with soft-touch plastic touch points
- High-friction feet to prevent slippage
- 3 different attachments including:
 - Partial steering wheel
 - Ball Grip
 - Shoulder-length extension



Design Concept

01

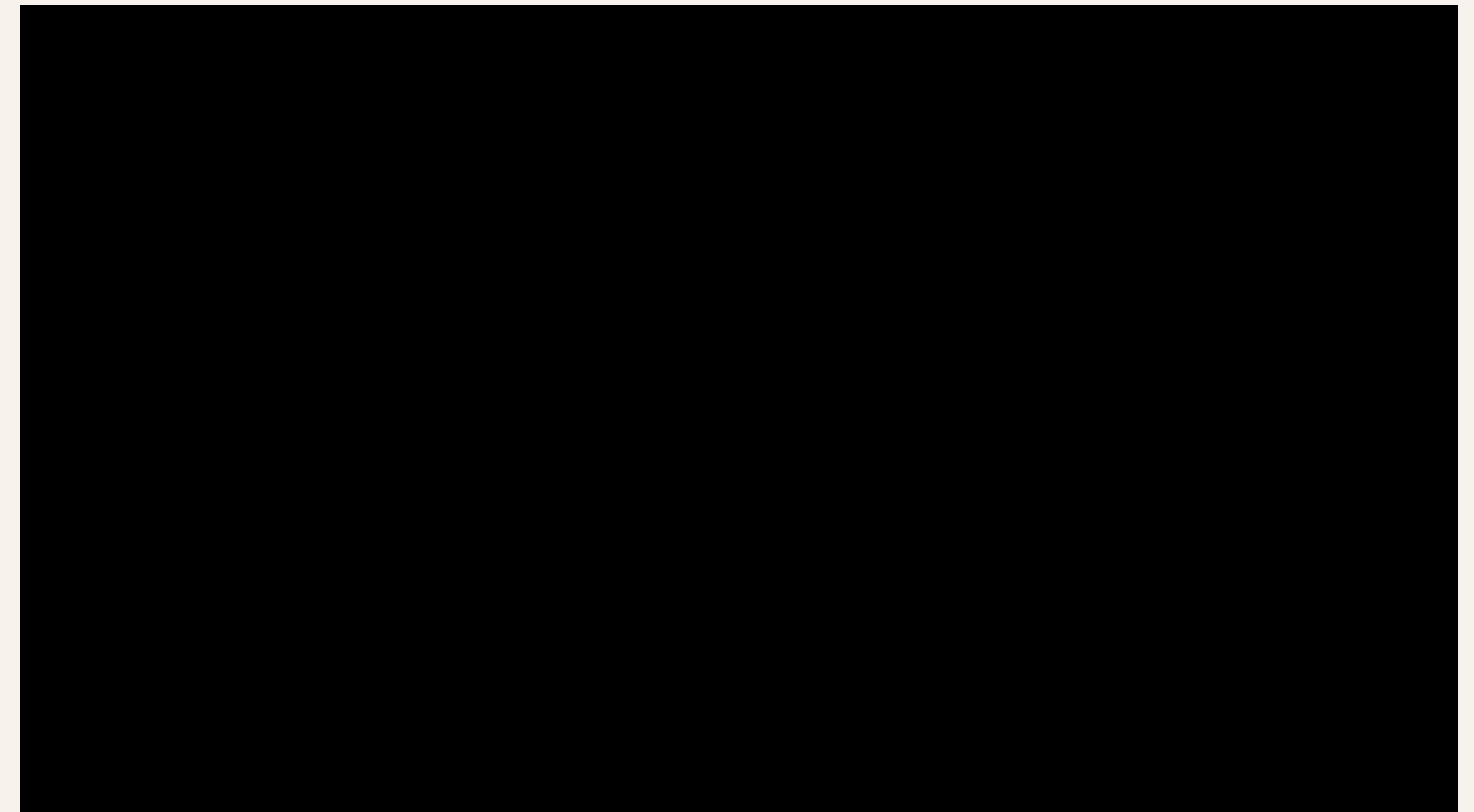
Motorized disc for mobilization of joint, with hard stops and manual controls.

02

Sturdy base with easily adjustable angles for multiple physiotherapy configurations.

03

Multiple attachments for variable physio approaches as deemed necessary by PT.



In action

Example Use Case - Elbow Mobilization: Resting your elbow on the cushion and holding the handle allows for the rotating disc to manipulate the arm around the elbow joint safely and smoothly.



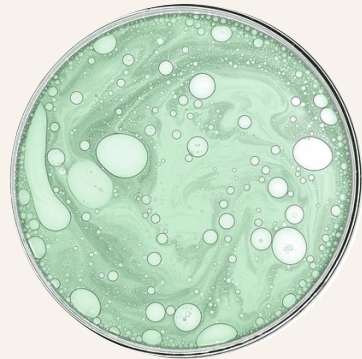
Anthropomorphic Compatibility



80% reduction in the time
needed to attend a PT session

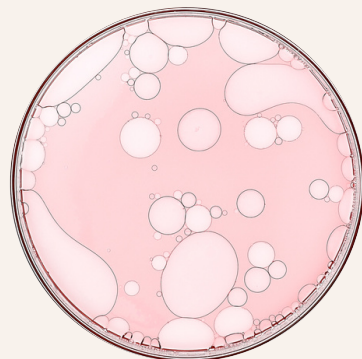


Value Proposition



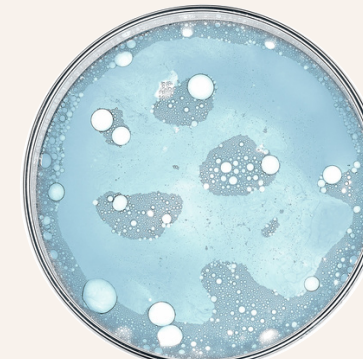
- **On-Demand PT**

PT exercises at the convenience of your home and schedule, no commute.



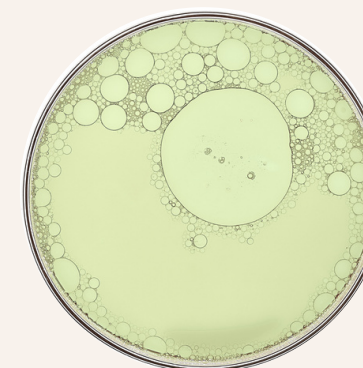
- **Easy-to-Use**

Simple snap-on grips and two buttons control interface
Designed with independent, one-handed set-up in mind



- **Dynamic ROM**

Customizeable mobilization ROM allows for comprehensive PT plans



- **Affordable**

Years of mobilization exercises at the price of two PT sessions.

Launch Plan



01

Testing and Iterations until MVP is reached and the client is satisfied.
Establishing brand assets.

02

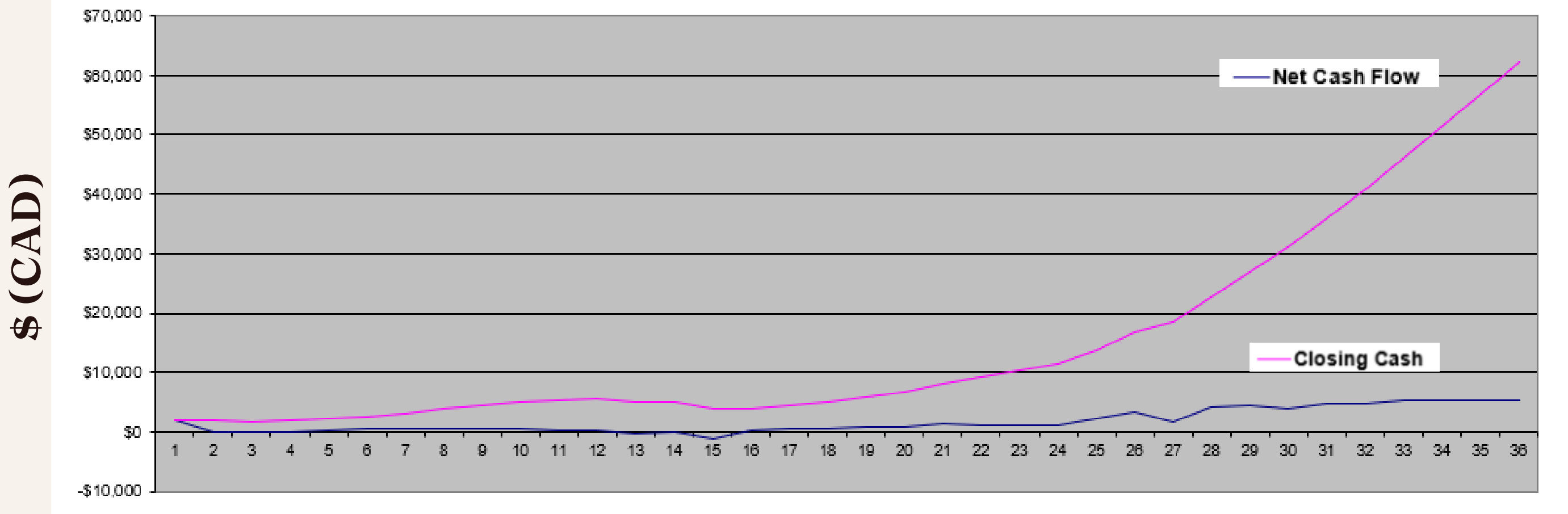
Partnering with Physiotherapists and running an in-clinic pilot as a marketing campaign.

03

Direct-to-Consumer selling transitions to B2B selling and implements a low-cost licensing model through Clinics.

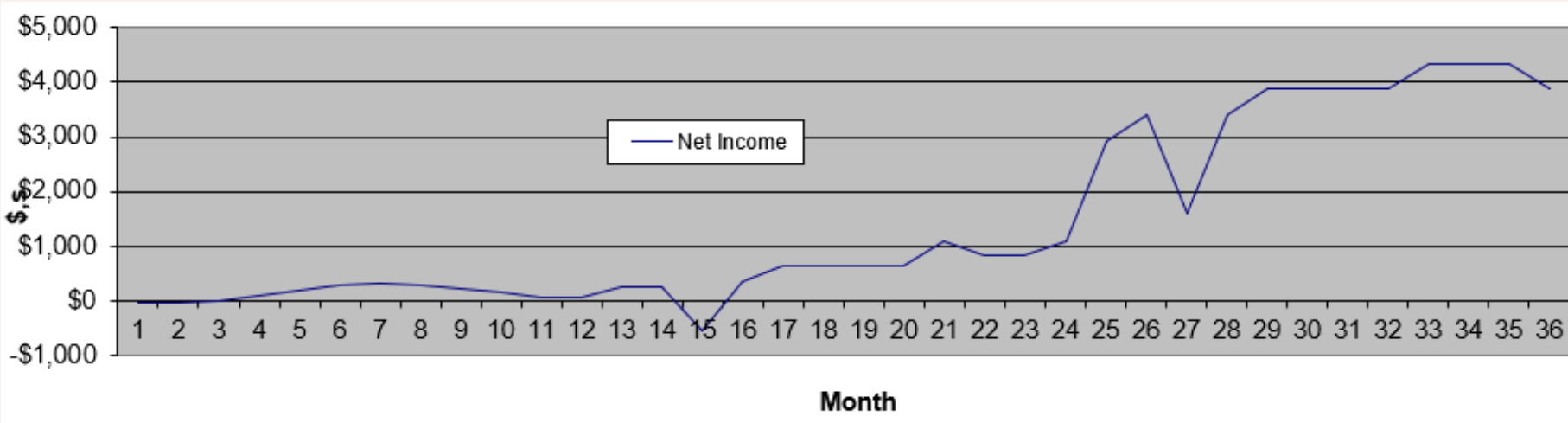
Financial Feasibility

Cash Flow Projections



36-Month Breakdown

Net Income



FourStroke Designs - PT			
Breakeven Analysis	Year 1	Year 2	Year 3
Selling Price	\$300.00	\$250.00	\$250.00
Variable Cost	\$115.00	\$60.00	\$40.00
Contribution	\$185.00	\$190.00	\$210.00
Fixed Expenses	\$1,992	\$11,608	\$20,386
Breakeven Volume (units)	10.77	61.09	97.07
Units Sold	20.00	100.00	300.00

Thank you!



Any Questions?

www.FourStrokeDesigns.ca

Boo, gotcha!