



Institute for
**Musculoskeletal
Health**

A research partnership between Sydney Local Health District and the University of Sydney in musculoskeletal health and physical activity

Using behaviour change science to help people with Parkinson's Disease be more active

Translating the evidence into practice



Prof Leanne
Hassett



Dr Jennifer
Cartwright



Ms Jo Dawson



Health
Sydney
Local Health District



THE UNIVERSITY OF
SYDNEY

Session Overview



Section 1

Why physical activity for people with Parkinson's Disease— and why it's hard

The evidence, the barriers, and the clinician's role



Section 2

Understanding Motivation & Behaviour Change

The science behind the strategies



Section 3

Practical Tools for the Clinic

The 5As framework and resources



Section 1

Why physical activity for people with Parkinson's Disease– and why it's hard

The evidence, the barriers, and
the clinician's role



Prof Leanne
Hassett

What is physical activity?

Domains

Transport



Work & household activity



Leisure activity

Sport



Recreation



Therapeutic exercise



Why Physical activity in Parkinson's Disease?



Motor

Improves gait, balance, bradykinesia; reduces falls risk



Cognitive

Slows decline; improves executive function



Mood

Reduces depression and anxiety



Quality of Life

Significant improvements across multiple domains



Neuroprotective

May slow disease progression

“Exercise is medicine”

In Parkinson's Disease, the dose-response evidence is strong



Ernst M, Folkerts AK, Gollan R, et al 2024. *Cochrane Database of Systematic Reviews*.



Article
Text



Article
info



Citation
Tools

Systematic review

Effects of sport or physical recreation for adults with physical or intellectual disabilities: a systematic review with meta-analysis FREE

Leanne Hassett^{1, 2}, Marnee J McKay³, Jenni Cole², Anne M Moseley², Sakina Chagpar^{1, 2}, Minke Geerts^{2, 4}, Wing S Kwok^{1, 2}, Connie Jensen², Catherine Sherrington^{1, 2}, Nora Shields⁵

Correspondence to Dr Leanne Hassett, Sydney Musculoskeletal Health, The University of Sydney Faculty of Medicine and Health, Sydney, New South Wales NSW 2050, Australia; Leanne.hassett@sydney.edu.au

Systematic review

Sub-group	Outcome												
	Activity					Quality of life			Impairment				
	Combined mobility	Walking endurance (m)	Walking speed (m/s)	Walking and changing positions (Timed Up and Go)	Balance (Berg Balance Scale)	Total score	Physical health summary score	Mental health summary score	Overall fatigue	Physical fatigue	Cognitive fatigue	Depression	Anxiety
All disability types	11 ⊕⊕○○	24 ⊕⊕○○	13 ⊕○○○	27 ⊕⊕○○	28 ⊕○○○	18 ⊕○○○	11 ⊕○○○	11 ⊕○○○	19 ⊕○○○	5 ⊕○○○	5 ⊕○○○	18 ⊕○○○	8 ⊕⊕○○
Intellectual disability		1		1								1	
Physical disability (degenerative) - Multiple Sclerosis	2	10		6	7	3	8	8	14	5	5	5	3
Physical disability (degenerative) - Parkinson's Disease	5	9	12	16	14	14			4			5	2
Physical disability (acquired)	4	4	1	4	7	1	3	3	1			7	3

favours intervention
 favours intervention, but 95% CI includes no effect
 no effect
 favours control, but 95% CI includes no effect
 favours control

Certainty of evidence: ⊕⊕⊕⊕ high certainty; ⊕⊕⊕○ moderate certainty; ⊕⊕○○ low certainty; ⊕○○○ very low certainty

How Much? Physical Activity Guidelines

WHO 2020 & Australian 2025 Guidelines for adults with disability or chronic conditions:



150+ min/week

Moderate-intensity aerobic activity



2+ days/week

Muscle-strengthening activities



3+ days/week

Functional activities that target mobility, balance and coordination

No amount is too small. Start small, build gradually at your own pace

The reality: How active are people with Parkinson's Disease?

2x

More likely to NOT meet PA guidelines



More likely to be active when their clinician discusses PA

Patient barriers:

- Fatigue and motor fluctuations
- Fear of falling or injury
- Low confidence: "I'm not an exercise person"

Clinician barriers to supporting patients:

- Limited consultation time
- Uncertainty about safe exercise types
- Lack of behaviour change tools

Common barriers to physical activity in Parkinson's Disease



From the Patient



Fatigue and 'off' periods during the day



Fear of falling or injury



Low confidence and motivation



Limited accessible exercise options



Fluctuating symptoms disrupt routine



For the Clinician supporting them



Limited appointment time



Uncertainty about safe exercise dose



No framework for behaviour change talk

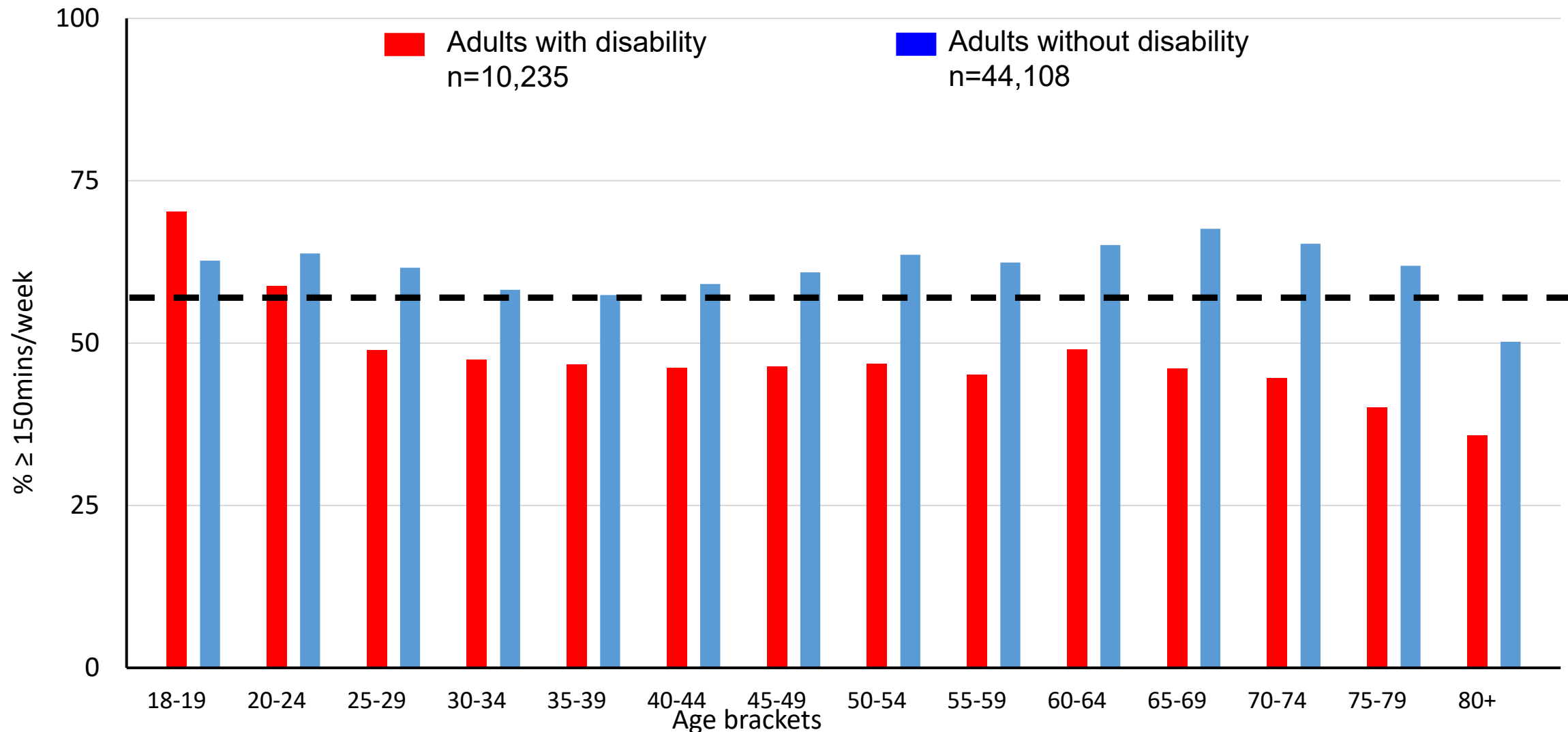


Difficulty following up on PA goals

Schootemeijer S, van der Kolk NM, Ellis T, et al. *Journal of Parkinson's Disease*. 2020;10(4):1293–1304 Strouwen C, Tabak M, Schooten KS, et al. *Physiotherapy*. 2023;121:14–22

Percentage adults with disability who meet PA guidelines through Leisure Time Physical Activity

Hassett 2021, *BMJ Open Sp Ex Med*



Motivators for currently inactive adults

Hassett 2021, *BMJOpen Sp Ex Med*



Adults with disability



Adults without disability



Institute for
Musculoskeletal
Health



Sydney
Local Health District



THE UNIVERSITY OF
SYDNEY

Barriers for currently inactive adults

Hassett 2021, *BMJOpen Sp Ex Med*



II Pause and reflect

Take 30 seconds to think about a patient you are currently supporting.



What barriers to physical activity come up most often for them?



What have you tried? What has felt stuck?



What might shift if you approached the conversation differently?



Clinicians can be part of the solution



- Promote physical activity in each interaction
- Use health coaching/ motivational interviewing approach
- Provide structured exercise
- Refer to community activities



- Practise what we preach
- Promote physical activity to colleagues
- Advocate for broader changes/ funding

Brief Interventions for Clinicians



Very Brief Intervention <2 minutes

Raise awareness, encourage, affirm



Brief Intervention A few minutes

Basic discussion, advice ± referral



Extended Brief Intervention 30+ minutes

Individual session, single or multiple visits

✓ People are more likely to be active when their health professional discusses PA with them

BMJ Open Physical activity coaching for adults with mobility limitations: protocol for the ComeBACK pragmatic hybrid effectiveness-implementation type 1 randomised controlled trial

Leanne Hassett,^{1,2,3} Anne Tiedemann,^{1,3} Rana S Hinman,⁴ Maria Crotty,⁵ Tammy Hoffmann,⁶ Lisa Harvey,⁷ Nicholas F Taylor,⁸ Colin Greaves,⁹ Daniel Treacy,^{1,3,10} Matthew Jennings,¹¹ Andrew Milat,^{3,12} Kim L Bennell,⁴ Kirsten Howard ,³ Maayken van den Berg,¹³ Marina Pinheiro,^{1,2,3} Siobhan Wong,^{1,3} Catherine Kirkham,^{1,3} Elizabeth Ramsay,^{1,3} Sandra O'Rourke,^{1,3} Catherine Sherrington ^{1,3}





Section 1

Why physical activity in people with Parkinson's Disease – and why it's hard

The evidence, the barriers, and
the clinician's role



Prof Leanne
Hassett



Section 1

Why Physical Activity in Parkinson's – And Why it's Hard

The evidence, the barriers, and the clinician's role



Section 2

Understanding Motivation & Behaviour Change

The science behind the strategies



Section 3

Practical Tools for the Clinic

The 5As framework and resources



Section 2

Understanding Motivation & Behaviour Change

The science behind the strategies



Dr Jennifer
Cartwright

Motivation continuum



"My doctor told me to"



"I feel so much better when I move"

MOTIVATION

Amotivation



Extrinsic
motivation



Intrinsic
motivation

More likely to initiate &
maintain behaviour

Ryan and Deci, 2000, *Am Psychol*

Self-determination theory

The CCC building blocks of intrinsic motivation:



Connectedness

Social links; group exercise; shared experience; therapeutic alliance



Competence

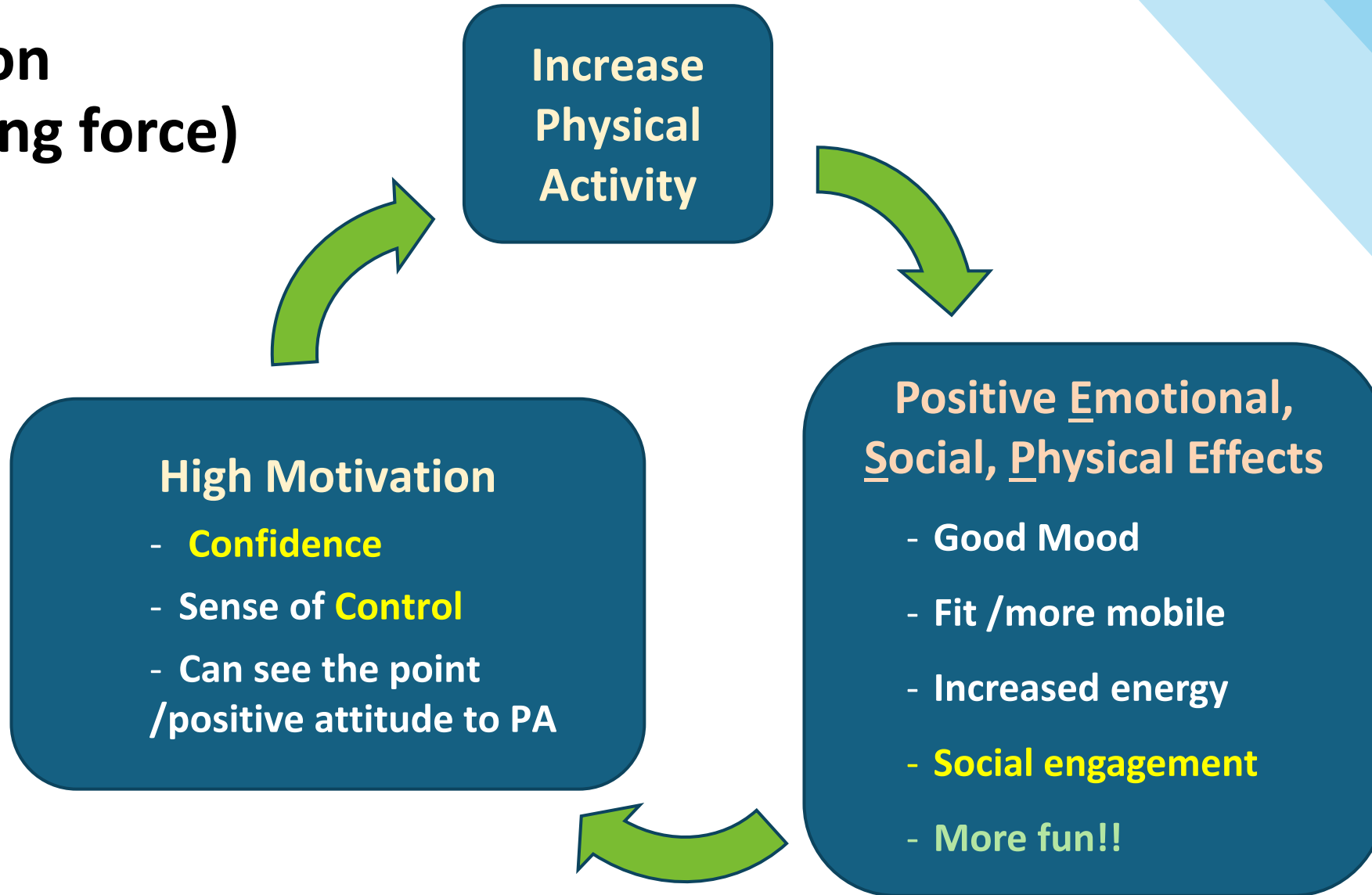
Build confidence through small, achievable goals



Control

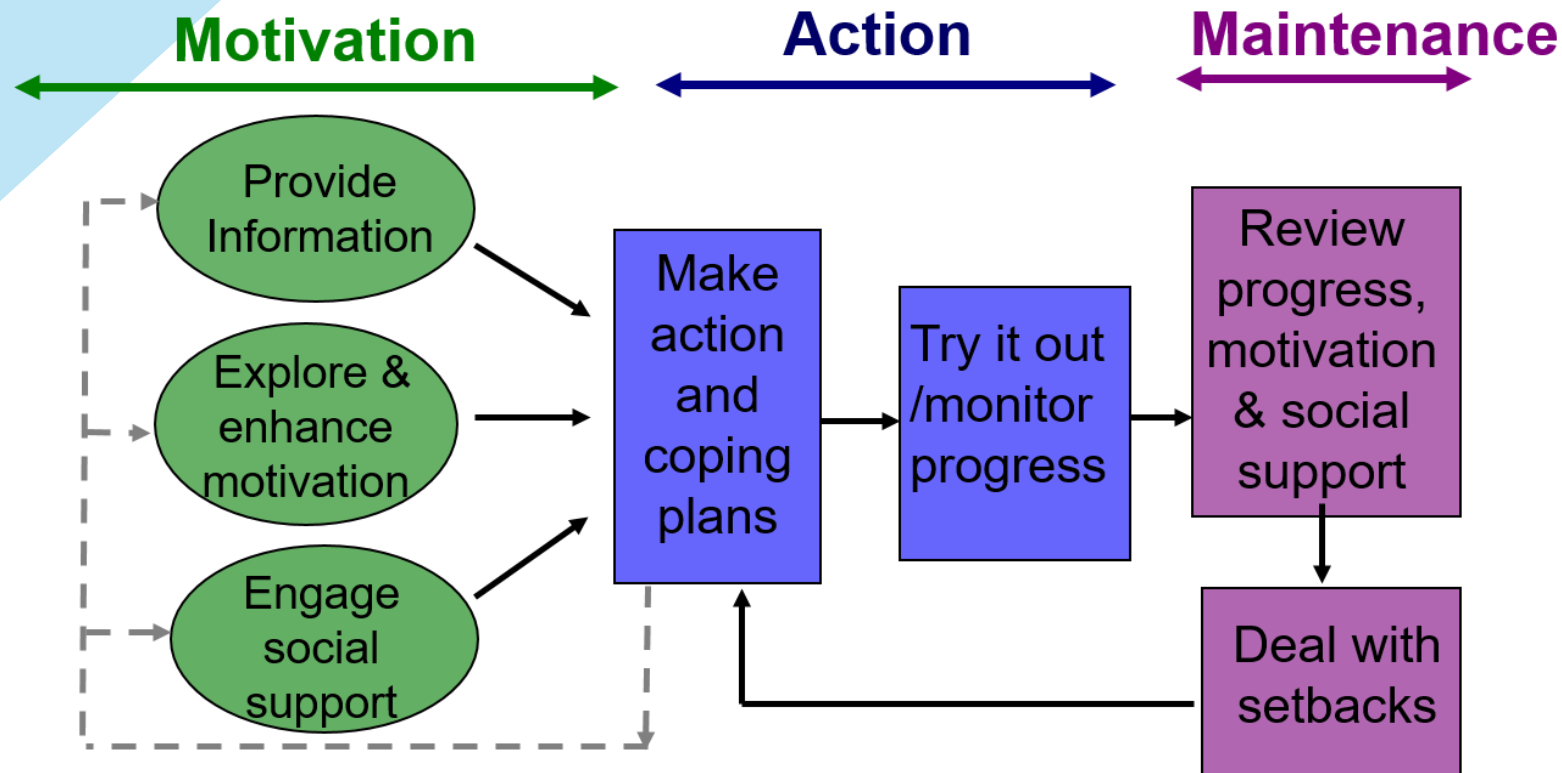
Offer choices; build independence; respect autonomy

Motivation (the driving force)



Slide: Colin Greaves, ComeBACK training

A “Road Map” for change



Over-arching philosophy:

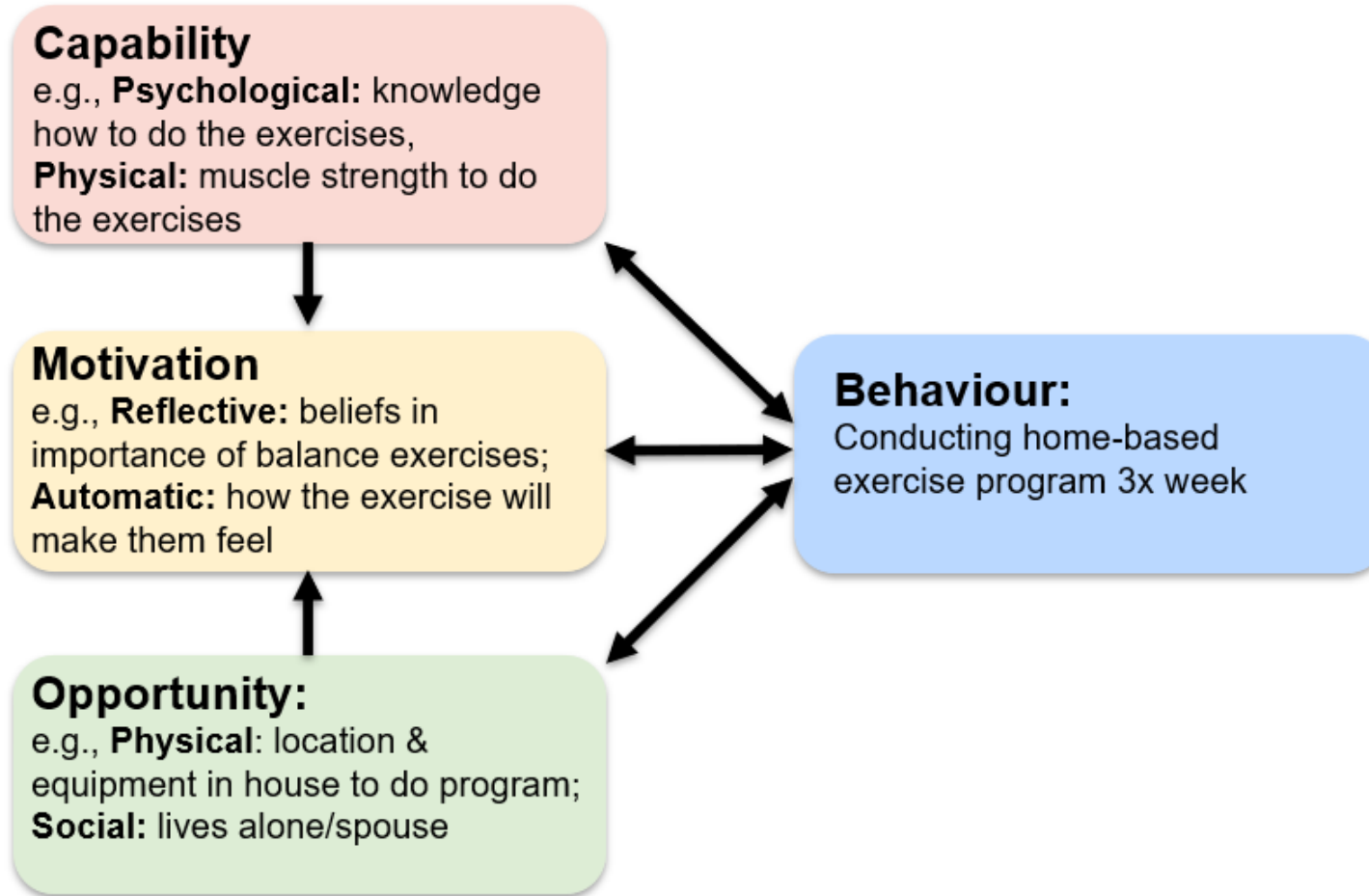
Emphasise empowerment / ownership of goals, risk and actions

Develop tools, strategies and motivation to manage lifestyle in the long term

Recognise and reinforce changes in **Competence**, **Control** and **Connectedness**

Slide: Colin Greaves, ComeBACK training

COM-B Model: What drives behaviour



COM-B: A Clinical Diagnostic Tool

Before choosing a strategy, diagnose the barrier — ask: what is stopping this person?



CAPABILITY

Physical or psychological ability to act

- ▶ Fear of falling
- ▶ Uncertainty about safe exercise
- ▶ Low fitness confidence



OPPORTUNITY

Environmental and social context

- ▶ No accessible program nearby
- ▶ No exercise partner or support
- ▶ Cost or transport barriers



MOTIVATION

Reflective and automatic drives

- ▶ “I’m not an exercise person”
- ▶ Low self-efficacy
- ▶ Amotivation



Institute for
Musculoskeletal
Health



Sydney
Local Health District



THE UNIVERSITY OF
SYDNEY

What is Health Coaching?

“Conversations that elicit behaviour change by supporting people to make sustainable change.” — Wolever et al., 2013



Patient-Centred

Goals determined by the patient, not imposed



Active Learning

Self-discovery, not information delivery



Self-Monitoring

Builds accountability and insight



Intrinsic Motivation

Develops the patient's own reasons for change

Behaviour Change Techniques

Observable, replicable strategies that change behaviour — the ‘active ingredients’ of effective PA promotion:



Goal Setting

Agree on a specific, achievable behaviour goal



Self-Monitoring

Track activity to build awareness and accountability



Action Planning

When, where and how will the behaviour happen?



Social Support

Informational, emotional, strategic and practical

 Evidence: Martin Ginis et al., 2020 (Health Psychology Review) — most effective BCTs for PA in people with disability

Motivational Interviewing: Spirit and Skills

“A particular way of talking with people about change and growth to strengthen their own motivation and commitment.” — Miller and Rollnick, 2023

Four Principles:

-  **Express Empathy**
Understand their world without judgment
-  **Support Self-Efficacy**
Believe in their ability to change
-  **Roll with Resistance**
Avoid arguing or confronting
-  **Develop Discrepancy**
Explore gap between goals and behaviour

The 4 Key Skills: OARS

-  Open-ended questions
-  Affirmations
-  Reflections
-  Summaries

The Elicit–Provide–Elicit Approach

A practical Motivational Interviewing tool for giving information without triggering resistance:



II Pause and Reflect

Think about how you currently talk about physical activity with your patients.

-  How much of the conversation is advice-giving vs. drawing out their own motivation?
-  When a patient resists or disengages, what is your usual response?
-  What would a conversation look like if you started with their 'why' before the 'what'?

Key Takeaways: Behaviour Change Science



Find the WHY First

Intrinsic motivation is more powerful and durable than extrinsic



Diagnose with COM-B

Identify if the barrier is capability, opportunity or motivation



Apply the BCTs

Goal setting, self-monitoring, action planning, social support



Use OARS + EPE

MI skills for productive PA conversations in limited time

In the next section, we put these ideas into a practical clinical framework you can start using.

Ambivalence: A Normal Part of Change

Ambivalence — feeling pulled in two directions — is NOT resistance. It is a normal and expected stage in behaviour change.

✗ What NOT to do



Lecture or argue — this triggers resistance (the righting reflex)



Push for commitment before the patient is ready



Dismiss or minimise their concerns

✓ What to do instead



Explore both sides with empathy: “What’s good about staying the same? And what concerns you?”



Steer toward positive framing: what would being more active make possible?



Work with their readiness stage — small steps are still forward

The PROMOTE-PA Study



About the Study

An NHMRC-funded study led by Prof Cathie Sherrington, University of Sydney

Investigated how health professionals can use the 5As model to promote PA to people attending outpatient healthcare services

Key findings so far



5As behaviour change framework supported clinicians in having conversations about PA



Education and upskilling in motivational interviewing supported practice changes for clinicians



Resources and Activity Directory helped clinicians support their patients to find community PA

PROMOTE-PA: Early Clinician Feedback



"The step count...is probably the main thing I use with patients. That's kind of additional to what I did previously... a nice way of helping people monitor their baseline activity."

"I find it (health coaching) very hard to apply...It's not (what they need) to change their mind. I think what they need is they need to be able to see it visually like that this is possible."

"(The 0-10 importance / confidence scale) was just a good way to have that conversation in a positive way to get them to reflect on the reasons why they might do physical activity."



Section 2

Understanding Motivation & Behaviour Change

The science behind the strategies



Dr Jennifer
Cartwright



Section 1

Why Physical Activity in Parkinson's – And Why it's Hard

The evidence, the barriers, and the clinician's role



Section 2

Understanding Motivation & Behaviour Change

The science behind the strategies



Section 3

Practical Tools for the Clinic

The 5As framework and resources



**Institute for
Musculoskeletal
Health**



**Sydney
Local Health District**



THE UNIVERSITY OF
SYDNEY



Section 3

Practical Tools for the Clinic

The 5As framework and
resources



Ms Jo Dawson

The 5As Model: A Flexible Clinical Framework

A structured but flexible approach to PA promotion in clinical practice (Estabrooks et al., 2003):



This is a framework, not a script — move flexibly between steps based on the conversation

Ask: Raising the Topic

? ASK

Many patients expect you to raise physical activity — and feel more confident when you do.

Even a very brief 'Ask' can open the door to a longer conversation at a future visit.

 Ask permission — it signals respect for their autonomy

 Keep it conversational, not clinical

 Return to it at every visit

Openers to try:

"Would it be okay if we talked about your movement or physical activity today?"

"How have you been keeping active since we last spoke?"

"Exercise is something I like to discuss with all my patients — is that okay?"



Assess: Understanding the Person in Front of You



What to assess:



Current PA levels

How active are they on a typical week?



Readiness to change

Pre-contemplation, contemplation, preparation?



Barriers and strengths

What helps? What gets in the way?

Importance & Confidence Scales

Importance



Confidence



📌 Aim for 7/10 confidence before setting a goal
“Why not lower?” — elicits their own reasons for change



Institute for
Musculoskeletal
Health



Sydney
Local Health District



THE UNIVERSITY OF
SYDNEY

Future Casting: Finding the 'Why'

Before setting goals, help the patient connect PA to what matters most to them



"What would be different in your life if you were more active?"



"What does staying active mean for your future self?"



"What would you be able to do that you can't do now?"



"Who else in your life would notice or benefit?"

➤ **Put the WHY first — then move to the WHAT (goals) and HOW (planning)**



Institute for
Musculoskeletal
Health



Sydney
Local Health District



THE UNIVERSITY OF
SYDNEY

Advice: Making Information Relevant and Non-Threatening



Elicit – Provide – Elicit

Make information relevant to the patient



Avoiding the Righting reflex

Unsolicited advice



Provide Handouts

Allows more time to digest information

Advise: Making Information Relevant and Non-Threatening

People resist advice not because they lack knowledge — but because it can feel like a threat to their identity.

✗ Instead of...

“You need to exercise to prevent falls.”

“You should do 150 minutes of exercise a week.”

“You really need to get moving.”

✓ Try this...

“Exercise can really help with your balance and how fluid your movement feels.”

“Many people find even 10–15 minutes a day makes a real difference to how they feel.”

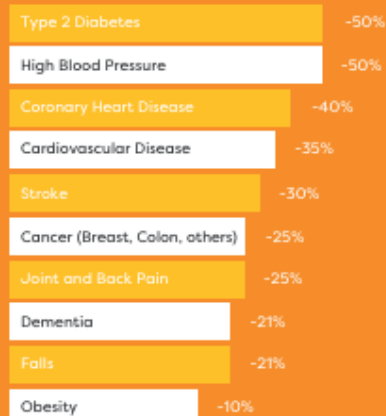
“Would it be okay if I shared what others in your situation have found helpful?”

Being active is important when you are living with Parkinson's

What good things could being more active do for you?



Reduce your risk by being more active. Keeping physically active reduces your chance of:



How can being active improve my quality of life?



Better fitness and stronger muscles



More energy and you feel less tired

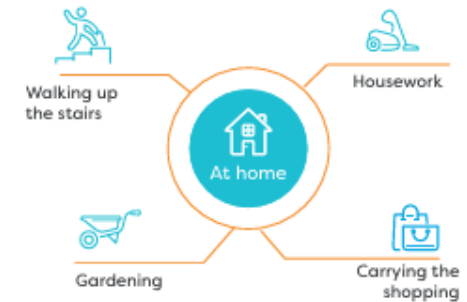
Everyday tasks performed more easily

Improved mood, sleep and confidence.

Follow these Top Tips to keep you active:

- 1 Physical activity is the one thing you can do to help yourself - Take Control.
- 2 Choose activities that you enjoy
- 3 Build up activity gradually and start gently. Once you have started, or if you are regularly active already, push yourself further as greater benefits come with higher intensity exercise.
- 4 Consider finding an "exercise buddy" - physical activity is often more enjoyable with others - social interaction helps with motivation and support.
- 5 Being more active and doing a mix of activities that challenge you can improve your ability to do day-to-day activities
- 6 Keep your brain active while you are physically active to get the most out of it - concentrate on how you are doing it i.e. your posture, symmetrical movement
- 7 Try moving to music or a beat. Many people with Parkinson's find this beneficial.
- 8 Manage your medication around your physical activity. It may be best to be active midway through your 'on' cycle but you will learn when the best time is. If you need help with this, let your health professional know.
- 9 Activity can be enjoyable in groups. Look out for local activity groups. There are Parkinson's tailored programmes that you could explore if you want specific guidance.
- 10 Keep it going whether at home, on your own, inside or outside or with others it all helps. Adapt activities to suit you.
- 11 Set yourself a goal and don't forget to celebrate your successes.

Build activity into everyday life:



Agree: Goal Setting That Works



Key principles:



Link it to what is important: Create a vision for the future "I want to... So that I can..."

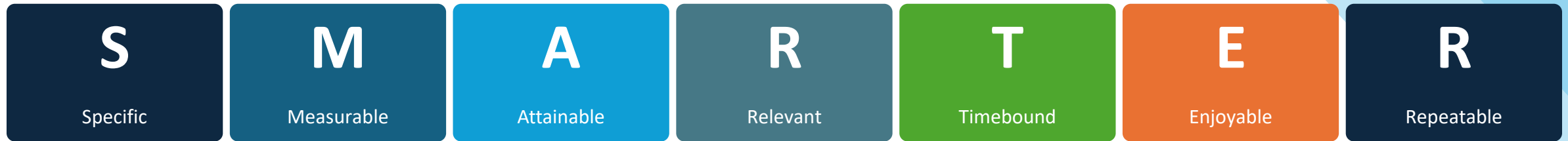


Start small — achieving a goal builds motivation for the next one. "What is in your power to change between now and the next time I see you?"



Check confidence: aim for 7/10+ before committing to the goal

Agree: Goal Setting That Works



Reframing goals:

Normalise setbacks

- Link goal success as a percentage rather than pass/fail

When goals aren't achieved:

- What got in the way?
- What could you do differently?
- Are you happy to try again?



Assist: Strengths-Based Action Planning

Explore strengths before barriers — this builds confidence and positive momentum:



Past Changes

What have you successfully changed before?



Personal Qualities

Determination, routine, humour, discipline



Social Support

Who might encourage or join you?



Energy Windows

When do you have the most energy in the day?



Enjoyment

An activity you've loved or always wanted to try



Environment

Nearby parks, pools, gyms or walking routes



Assist: Exploring Barriers for Action Planning

Explore Barriers and develop strategies based from the strengths identified:



Barriers

What might get in the way?



Strategies

How will you overcome this?



**Institute for
Musculoskeletal
Health**



**Sydney
Local Health District**



**THE UNIVERSITY OF
SYDNEY**

Assist: Building the Action Plan



If-Then Planning

"If it is Tuesday morning after breakfast, then I will walk to the end of the street and back. If it is too hot, my plan B is to turn on YouTube and do a 10min video in front of my fan. "

Specific time + place + action dramatically increases follow-through



Habit Stacking

Attach new activity to an existing daily habit.

"After I make my morning coffee, I will do 10 minutes of exercises."



Accountability

Track it. Tell someone. Write it in the calendar.

Activity diary, app, pedometer, wearable — social accountability is powerful



The 4 E's

Enjoyable | Easily accessible | Essential to you | Embedded in daily life

Habits that tick all four are the ones that last

Arrange: Follow-Up, Referral and Support



Self-Monitoring Tools

Activity diaries, apps, pedometers, wearables — tracking builds awareness and motivation



Follow-Up

Even a brief check-in (“How did the walking go this week?”) sustains momentum — celebrate small wins



Community Referrals

Neurological exercise programs, community exercise with trained instructors, PD support groups.

Create/access a directory of local services to refer to



Social Support

Who else can be part of the plan and what support can they offer?

- Emotional
- Strategic
- Practical

Peer support, group exercise, family involvement



What's in the community?

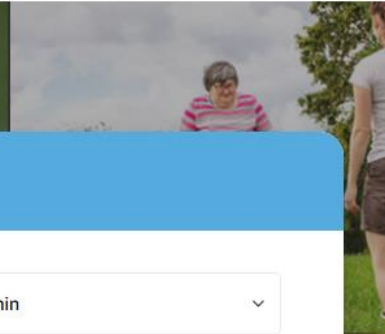
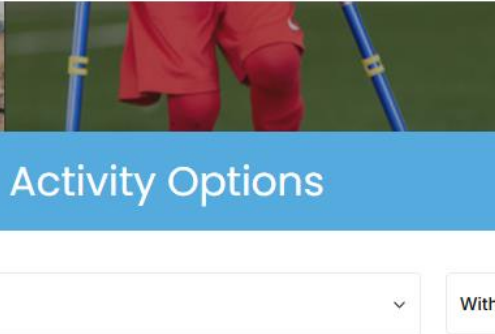
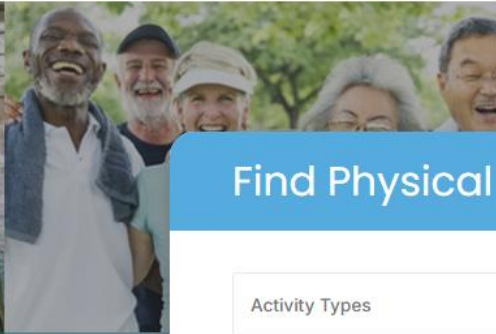
Welcome to



Inform
progra

As we ge
better he
people li

Find



Community Directory

The Community Directory contains detailed information about nearby community services, organisations and groups which

submission or to modify the information you supply published entry, please [email our team](#).

and activities near you.

Select Language

Find Physical Activity Options

Activity Types

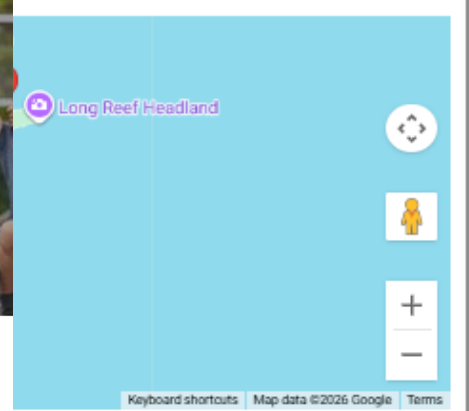
Within

Postcode

Enter business or organisation name

Program Filters

SEARCH ACTIVITY



Musculoskeletal
Health



Sydney
Local Health District



THE UNIVERSITY OF
SYDNEY

What's in the community?



Nepean Blue Mountain's Parkinson's Support Group

PING PONG PARKINSON
10am-12pm 8g
Glenmore Park Community Centre

Common Pitfalls — and What to Do Instead

✗ Common Pitfall

The Righting Reflex

Telling patients what to do; overwhelming with advice

Goals Without the WHY

Setting targets before finding intrinsic motivation

Overambitious Goals

Setting goals the patient can't achieve (confidence <7/10)

No Follow-Up

Goals without accountability rarely stick

Information Overload

Dumping facts without permission or checking understanding

✓ Instead...

Draw out their own motivation with open questions; use Elicit–Provide–Elicit

Explore what is important to the individual. Find the WHY before making the goal and action plan, the WHAT and HOW

Start smaller. Achievement builds momentum and confidence

Even a brief check-in at the next visit makes a meaningful difference

Use the Elicit–Provide–Elicit technique. Keep information brief, relevant and with their consent

Embedding PA Promotion in Everyday Practice



Individual Clinician

- ▶ Add a PA question to every clinical encounter — even briefly
- ▶ Consider which of the 5 A's is appropriate for your session and how you can embed the principals.
- ▶ Use confidence and importance intervals to gage where to direct education and support
- ▶ Your own relationship with PA shapes what you model



Team and Workplace

- ▶ Include PA promotion in team meetings and case reviews
- ▶ Share resources and referral pathways with colleagues
- ▶ Advocate for time and resources to have these conversations
- ▶ Create or update shared templates for PA goal-setting and follow-up





Section 3

Practical Tools for the Clinic

The 5As framework and
resources



Ms Jo Dawson



Section 1

Why Physical Activity in Parkinson's – And Why it's Hard

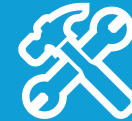
The evidence, the barriers, and the clinician's role



Section 2

Understanding Motivation & Behaviour Change

The science behind the strategies



Section 3

Practical Tools for the Clinic

The 5As framework and resources



Your Coaching Questions Cheat Sheet

Screenshot or save this slide — try one or two questions in your next clinical interaction:

1

What would you like to change about your current level of activity?

2

Why do you want to make this change? Why is it important?

3

What would be different if you made this change? How would you see yourself or how would you feel?

4

What strengths can you bring to help achieve this goal? (Determination, routine, support from others)

5

What is getting in the way?

6

How could you work around these?

7

What is in your power to change between now and the next session?

8

How will you remember to do this and make it part of your routine?



**Institute for
Musculoskeletal
Health**



**Sydney
Local Health District**



**THE UNIVERSITY OF
SYDNEY**

Further training

- Wellness Coaching Australia – Coaching Certification Level 1-4
- Australasian Society of Lifestyle Medicine
- Dr Stephen Rollnick (co-founder of MI) – (2020) Motivational Interviewing in Healthcare – eWorkshop

Key Takeaways



Section 1

Physical activity is evidence-based medicine in PD — and barriers are real but addressable



Section 2

Behaviour change needs the right diagnosis (COM-B) and approach — find the intrinsic WHY before the WHAT and HOW



Section 3

The 5As gives you a flexible, patient-centred clinical framework — even brief structured conversations make a meaningful difference



What's ONE thing you will try in your next clinical interaction?



Institute for Musculoskeletal Health

A research partnership between Sydney Local Health District and the University of Sydney in musculoskeletal health and physical activity

Thank you for watching!

Please get in touch & follow on socials



Prof Leanne Hassett

Leanne.Hassett@sydney.edu.au



Leanne Hassett



Dr Jennifer Cartwright

Jennifer.Cartwright@sydney.edu.au



@drjencartwright



Ms Jo Dawson

J.Dawson@sydney.edu.au



@seasonsphysioandpilates



Health
Sydney
Local Health District



THE UNIVERSITY OF
SYDNEY