



# MIND IN MOTION

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# PROGRAM GUIDE

2023-2024

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If you have any questions, comments, concerns, or thoughts, please do not hesitate to reach out to the project team.

## HELLO!

Welcome to Mind In Motion! We're glad to see you!

**Mind In Motion** is an exercise referral program for UBC students experiencing depressive symptoms. This guide contains everything you need to know about the program ... and, maybe a little bit more. It is divided into nine parts:

<b>BACKGROUND</b>	Introduction to exercise-based treatment for depression (EBT-D) and the CANMAT Clinical Guidelines.
<b>THE PROGRAM</b>	Introduction to Mind In Motion, including how it fits into the UBC Counselling Services stepped care model.
<b>ELIGIBILITY</b>	Overview of student eligibility and ineligibility criteria.
<b>REFERRALS</b>	Tips on how to speak with students about Mind In Motion. Instructions on how to complete and submit referral paperwork.
<b>INTAKE</b>	Overview of the Mind In Motion intake process and safety screening.
<b>INTERVENTION</b>	Summary of the 6-week exercise program and supports.
<b>DISCHARGE</b>	Post-intervention communication strategy with UBC Counselling Services. List of available post-intervention exercise supports.
<b>RESEARCH</b>	Evaluation framework, timepoints, and measures.
<b>APPENDIXES</b>	The Exercise & Depression Toolkit, referral paperwork, and reporting templates.

While we recommend reading the entire manual, there are certain sections that might be especially relevant to you:

- **UBC Counselling Services:** Chapters 1, 2, 3, 4, and 7
- **UBC BodyWorks:** Chapters 1, 2, 5, 6, and 7
- **PopPA Lab:** Chapters 1, 2, 6, and 8

## PROJECT TIMELINE

Phase I of Mind In Motion will run from September 2023 through April 2024. Here is an overview of the major time points:

<b>June-July</b>	PopPA Lab to finalized referral pathways and submit ethics paperwork Finalize intervention content with BodyWorks staff
<b>August</b>	Receive research ethics clearance
<b>September 10</b>	Training with UBC BodyWorks staff
<b>September 14</b>	Training with UBC Counselling staff
<b>September 25</b>	Cohort #1 opens for referrals – <i>25 spots available for Fall 2023</i>
<b>November 1?</b>	Cohort #1 closed for referrals
<b>January 1</b>	Cohort #2 opens for referrals – <i>25 spots available for Winter 2024</i>
<b>January 30</b>	Initial evaluation report released to Counselling Services and BodyWorks
<b>March 1?</b>	Cohort #2 closed for referrals
<b>May 31</b>	Updated evaluation report released to Counselling Services and BodyWorks



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## BACKGROUND

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Depression is a chronic health condition characterized by low mood and anhedonia (loss of pleasure). Up to 70% of Canadian post-secondary students experience depressive symptoms (DeJonge et al., 2021).

In addition to its emotional, neurophysiological, and cognitive symptoms, depression can negatively impact academic performance (Canadian Association of College & University Student Services and Canadian Mental Health Association, 2013). Unsurprisingly, depressive symptoms are one the top reasons students seek campus mental health care.

## CANMAT Treatment Guidelines

Over the past two decades, an increasing amount of research has identified exercise as an effective treatment option for depression. In 2016, the evidence had accumulated to the point where clinical guidelines could be made. The Canadian Network for Mood and Anxiety Treatments (CANMAT) now identifies exercise as a **first-line monotherapy for mild-moderate depression, and an adjunctive treatment for moderate-severe depression**. Specifically, CANMAT recommends:



At least 30 minutes of exercise



At a moderate or vigorous intensity



At least 3 days per week



For at least 9 weeks



Under the supervisor of an exercise provider

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Not only can exercise reduce depressive symptoms, but it can increase mental well-being and improve physical and social functioning (Glowacki et al., 2019; Ravindran et al., 2016; Singh et al., 2023).

## How does exercise work?

We are just starting to understand how how exercise interacts with depressive symptoms. It is likely that the benefits of exercise stem from a combination of psychological, neurophysiological, and social mechanisms (Singh et al., 2023).

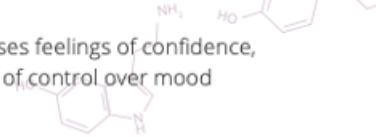
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**Biological:** Increases in serotonin and dopamine—neurotransmitters or “feel-good” brain chemicals that are released while being physically active

**Psychological:** Increases feelings of confidence, self-esteem and sense of control over mood



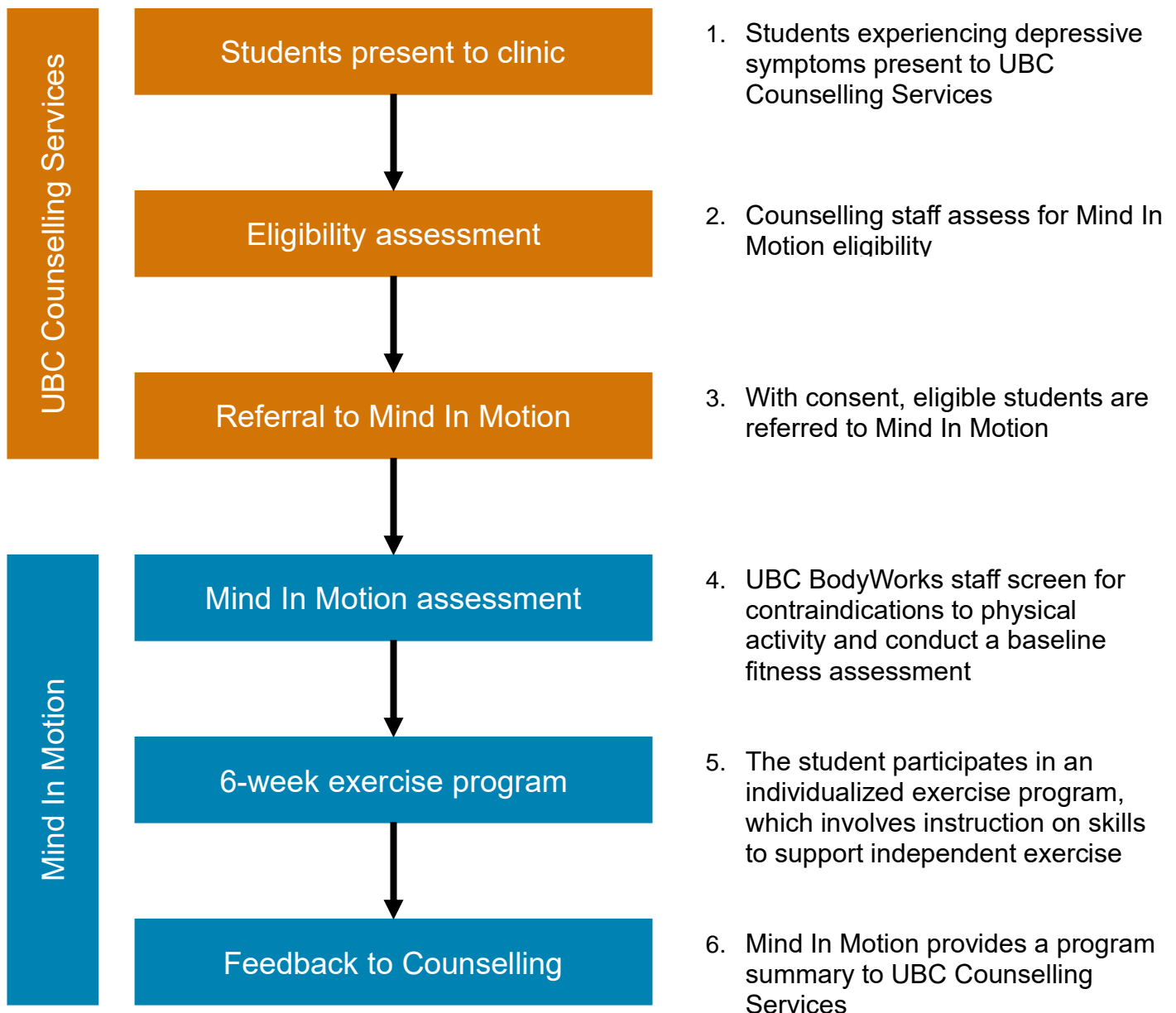
While we do not have space to summarize this large field of research, here are some results you might find interesting:

- **Neurophysiological.** Thousands of studies have examined how exercise impacts the body and nervous system (e.g., Heissel et al., 2023). Exercise affects nearly every system of the body, from DNA to complex organ systems – including the brain. Exercise changes the central nervous system in many ways, including increased grey matter volume and activation, synaptic plasticity, neurotrophin gene and protein expression, the release of endogenous opioids, and less inflammation (Lubans et al., 2016). Some neurophysiological changes are the result of improved overall health, such as cardiovascular health (including cerebral bloodflow) and metabolic processes.
- **Psychological.** Exercise can beneficially effect a number of psychological processes, including affect, self-esteem, self-confidence, and physical self-perceptions (e.g. body image, feelings of pride and satisfaction; Faulkner et al, 2016).
- **Social.** Social well-being is enhanced through exercise and activity communities. Exercise can provide opportunities for socialization, increase social confidence in social settings, and improve family and peer experiences (Lubans et al., 2016). Exercise can also increase a person’s exposure to their built and natural environment, such as through clubs, exploring new hikes, and nature-based activity.
- **Behavioural.** Exercise can benefit mental health through improving overall lifestyle factors, such as increased sleep quality, improved time management, and improved coping and self-regulatory skills (Lubans et al., 2016).

## THE PROGRAM

**Mind In Motion** is an evidence-based exercise referral program for UBC students with clinically significant depressive symptoms. The program involves a 6-week exercise intervention (2 x 1-hour sessions per week), with additional support to help encourage independent self-managed exercise. Participation in the program is free with a referral from UBC Counselling Services.

Mind In Motion follows a six-step process:





### Who is involved?

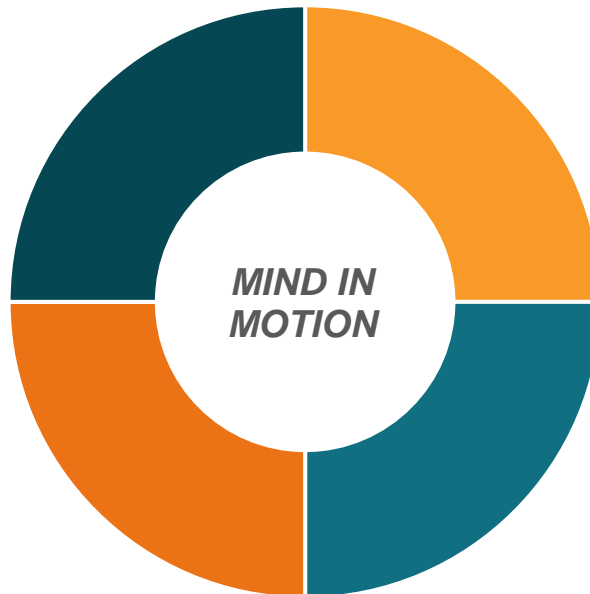
During the 2023-2024 academic year, Mind In Motion will involve four stakeholder groups:

#### UBC Students

- Current students
- Part- or full-time
- Experiencing clinically significant depressive symptoms

#### PopPA Lab

- Program development and evaluation
- Facilitating communication between Counselling Services and BodyWorks



#### UBC Counselling Services

- Identification of students with depressive symptoms
- Referrals to BodyWorks

#### UBC BodyWorks

- Assessment for exercise safety
- Exercise programming

### What type of exercise will students do?

Students will be matched with a Personal Trainer at BodyWorks for a 6-week individualized intervention. A typical program will include a combination of aerobic (cardiovascular) and anaerobic (strength) training, though this is subject to students' preferences, fitness assessment, and abilities. The intervention will be structured to include opportunities for home-based practice, to ensure that students are able to transition to independent exercise after the intervention is over.

### What training do the exercise providers have?

BodyWorks is overseen by a CSEP-Certified Exercise Physiologist (CEP), and employs CSEP-Certified Personal Trainers (CPTs) and senior-level kinesiology undergraduates. CEPs are able to work with clients with complex chronic health conditions, whereas CPTs can work with clients with stable chronic health conditions.

In addition, all program staff have the following credentials:

- First aid and CPR-C certification
- Completion of a 10-hour training program on mental health literacy
- A 2-hour training program on Mind In Motion protocols, including training on informed consent and confidentiality

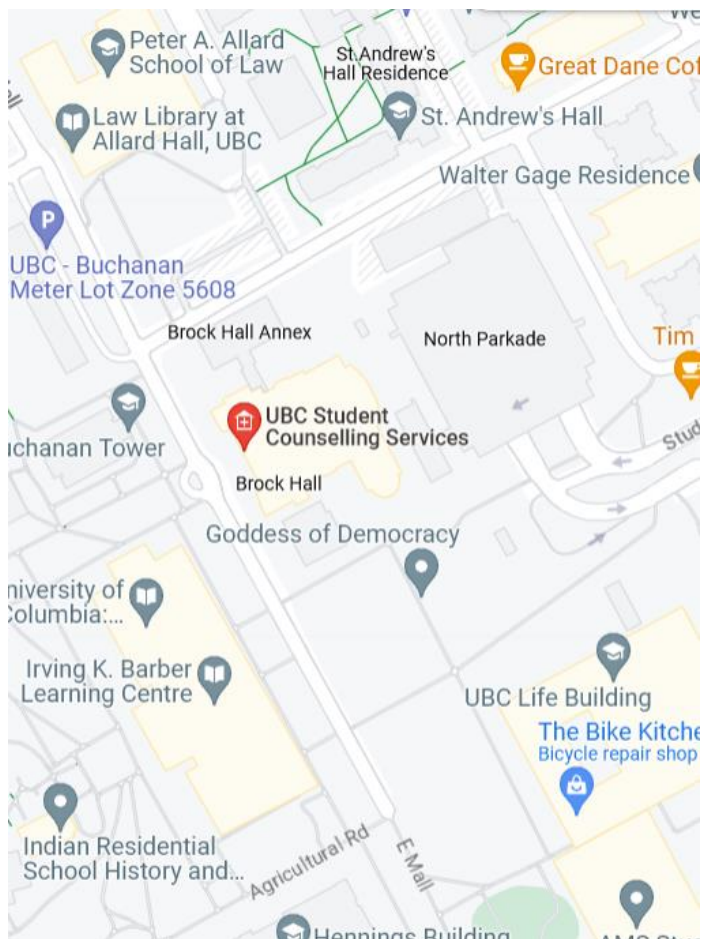
### When will the program run?

The first cohort of students will run from September to December 2023; the second cohort of students will run from January to April 2024.

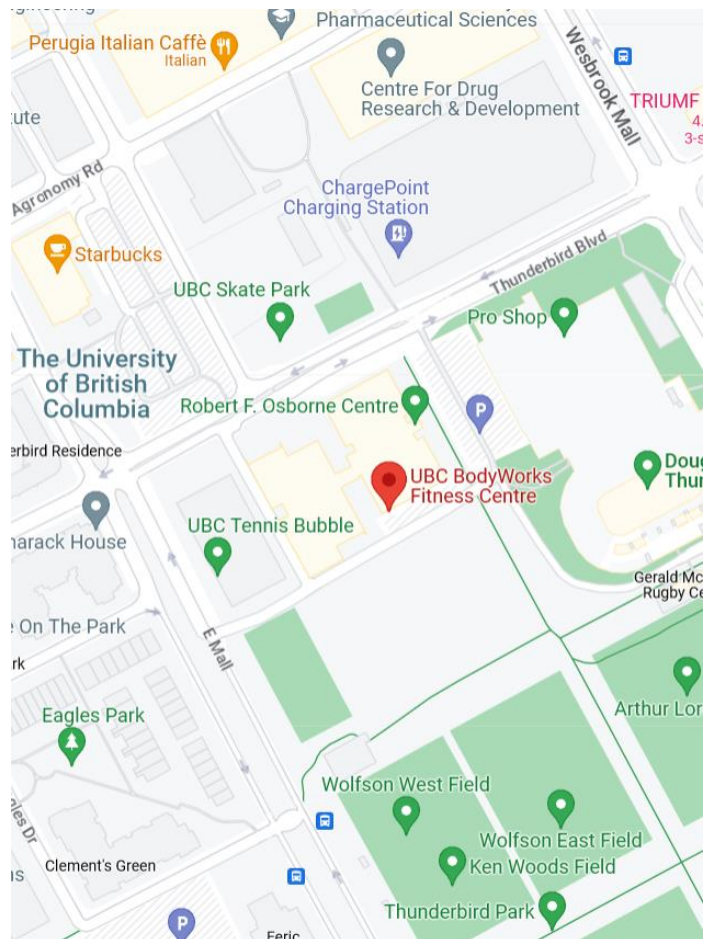
### Where will the program occur?

Mind In Motion will occur at two primary sites:

**Eligible students will be identified at UBC Counselling Services**, a campus-based mental health clinic. The main clinic is located at 1874 East Mall.



**Exercise programming will occur at UBC BodyWorks**, a campus-based exercise facility located in the Osborne Center, 6108 Thunderbird Boulevard.



### Who is funding this project?

This project is funded by CIHR and Campus as a Living Lab.

## ELIGIBILITY CRITERIA

### Who is exercise good for?

EBT-D is appropriate for people experiencing a range of depressive symptoms and can be applied across the UBC Counselling Services stepped care model:

Wellness	Early intervention	Mild-moderate	Moderate-severe
Exercise promotes health and wellness, and is a self-care strategy.	Exercise can help prevent the onset of depression.	Exercise can be prescribed as a monotherapy.	Exercise can be prescribed as an adjunctive treatment.

### Who is eligible for Mind In Motion?

During this initial phase, Mind In Motion will only accept referrals for patients with clinically significant depressive symptoms. We may expand this program in the future, pending staff availability and funding.

For 2023-2024, Mind In Motion has two primary eligibility criteria:

- 1) Currently experiencing **clinically-significant depressive symptoms**
- 2) Currently **a UBC student** – including graduate students and part-time students

The program is open to students of all ages, ethnicities, genders, sexual orientations, ability levels, fitness levels, and exercise histories.

A full overview of eligibility / ineligibility criteria can be found on the next page.

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	<input checked="" type="checkbox"/> <b>Eligible</b>	<input type="checkbox"/> <b>Ineligible</b>
<b>Student status</b>	Current UBC student (graduate or undergrad, part-time or full-time)	UBC faculty, staff, or alumni Community members
<b>Demographics</b>	Able to answer questions in English and read written English  All genders and sexualities  All ethnicities	N/A
<b>Depression</b>	Current diagnosis of MDD, persistent depressive disorder, premenstrual dysphoric disorder, or other specified depressive disorder  <i>and/or</i> $5 \leq \text{PHQ-9} \leq 19$	Subclinical depressive symptoms  <i>and/or</i> PHQ-9 < 5 PHQ-9 $\geq$ 20
<b>Mental health</b>	N/A	Active suicidal ideation / imminent risk of harm to self or others  Active alcohol or substance use  Active serious mental illness  Active or historic eating disorder  Other features that, in the opinion of the mental health provider, make the person a poor fit for exercise-based intervention
<b>Health status</b>	N/A	Health condition that makes exercise unsafe  Pregnant or breastfeeding
<b>Current physical activity level</b>	Exercising < 3 times per week  All ability levels	Exercising $\geq$ 3 times per week
<b>Availability</b>	Able to attend a twice-weekly 6-week exercise intervention	Anticipating travel or personal commitments that would prevent them from engaging fully with the program

## REFERRALS

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### Why should I place a referral?

Great question! We have 10 reasons why.

1. **Exercise works!** Exercise is an evidence-based treatment for depression.
2. **Exercise is safe!** While no treatment is risk-free, exercise has a strong safety profile – especially when supervised by a qualified provider. Students will undergo an initial health and fitness assessment, and their BodyWorks sessions will be supervised by exercise professionals.
3. **Exercise has lots of positive side-effects.** Increased fitness! More confidence! Reduced risk of chronic disease! Better quality of life! Exercise has dozens of health and psychosocial benefits.
4. **Mind In Motion supports patient-centred care.** Not every student is interested in medication or therapy. Exercise is an option for students who want to explore different mental health treatments.
5. **Exercise is non-stigmatizing.** Gyms are a non-medical space, and physical activity does not carry the same stigma as conventional mental health treatments.
6. **Mind In Motion is free!** Mind in Motion is offering personalized, inclusive exercise programming at no cost to eligible students.
7. **Mind In Motion will help address campus mental health needs.** Our campus-based exercise program will provide students with another treatment option. Over the year, it might help reduce waitlists for other mental health or health services.
8. **People with depression tend to be less active than people without depression.** Mind In Motion provides the opportunity to develop physical fitness in a safe and supportive environment.
9. **Mind In Motion will build capacity.** Starting September 2024, we will expand this program to include a Kinesiology work-learn experience. Senior kinesiology students will provide exercise services under the supervision of a CSEP-certified clinical exercise physiologist.
10. **Mind In Motion represents an important advancement.** Most work on EBT-D has been researcher-led and time-limited. Mind In Motion is one of the first examples of integrating EBT-D into an existing mental health service with a long-term sustainability plan.

## How can I talk to students about a referral?

Every clinician has their own style, and we encourage you to develop your own strategy for talking with students about EBT-D. We also know EBT-D is a new treatment modality, and might not be something that you have experience talking about. Here are some tips to get you started:

1. **Are they eligible?** Students with clinically-significant depressive symptoms are eligible for referral! If your student meets diagnostic criteria for clinical depression and/or is reporting elevated depressive symptoms (PHQ-9 scores  $\geq 10$ ), then they meet the first eligibility criteria for Mind In Motion!
2. **How often do they exercise?** Asking about exercise is great additions to any intake interview. First, ask your client if it is OK to talk about their exercise routine. If they consent, ask about FITT: **frequency** (how many times per week?), **intensity** (light? moderate? vigorous?), **time** (how long each session?), and **type** (what kind of activity?). If your student is reporting < 3 exercise sessions per week, they meet our eligibility criteria.
3. **New patients.** A great time to discuss Mind In Motion is when giving feedback and discussing treatment planning with your student. When discussing treatment options, present Mind In Motion as **another** treatment option available to students. For example:

A new treatment that we're offering at UBC this year is Mind In Motion – which is a free exercise program for students with depressive symptoms. Can I share more about this?

Exercise is an effective and research-backed treatment for depression. In fact, it's recommended by a Canadian psychiatric organization. It might sound a bit unbelievable – but studies show that exercise is about as effective as therapy or medication for people with depressive symptoms. We're just starting to understand how exercise works, but we think it has something to do with how exercise changes the brain. For example, exercise improves brain connectivity. It might also decrease inflammation, help us sleep better, and boost confidence.

Mind In Motion is a partnership between Counselling Services and BodyWorks – which is located here on campus. It's a **free**, individualized 6-week exercise program that is led by exercise professionals. You would attend two 1-hour sessions per week, and they also encourage you to exercise on your own once per week.

What do you think about trying this out?

4. **Existing patients.** Existing patients who are receiving therapy are welcome to participate in Mind In Motion, so long as they meet eligibility criteria.

### How do I place a referral?

The UBC Counselling Services computer system is set up with referral documentation. We recommend completing this form together with your student!

Once you have completed the form, the referral is e-faxed to BodyWorks via the Counselling Services clerks. Let the student know you will refer them to BodyWorks, and they will be contacted by a Lead Exercise Professional to book an initial session.

### What next?

BodyWorks staff will review the referral document, and will contact your student by e-mail within 3-5 work days.

Along with the welcome e-mail, your student will receive a copy of the **Get Active Questionnaire (GAQ)**. The GAQ is a brief screening tool that explores different medical contraindications to exercise.

## INTAKE

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Referrals will be sent from UBC Counselling Services to BodyWorks via efax. Once a referral is received, the Mind In Motion intake process begins!

One goal of Mind In Motion is to create a sustainable, campus-based exercise program for students with depression. As such, the Mind In Motion intake is very similar to BodyWorks' current process. It involves three steps.

### Step 1: Confirm Eligibility

1. **Review the referral document for student eligibility.** UBC Counselling staff will screen for eligibility while completing the referral document with students. However, it is always good to double check. In particular, please check students' exercise level: they should **only** be exercising 0, 1, or 2 times per week.

The Pop-PA Lab is available to review referrals for eligibility if you have any questions or concerns. Please contact the Pop-PA RA (Cassandra) if you need help.

2. **Send the Get Active Questionnaire and welcome message.** Please ensure this is sent within 3-5 business days of receiving the referral form.
3. **Review the GAQ, and follow-up as needed.** If you have any concerns, seek medical clearance for exercise.

### Step 2: Registration

Once a student has screened in to Mind In Motion, they will be officially invited to participate in the program!

4. **Send out the introductory e-mail.** This e-mail includes program information, letter of information and consent, REDCap survey link, and an introduction to the Pop-PA RA (Cassandra). Cassandra will contact the student directly to discuss study-related activities. Please ensure this letter is sent within 3-5 business days of receiving the GAQ.
5. **Register the student.** Ensure the student has registered in the BodyWorks booking system and has booked their initial session.

Students can book their first exercise session through the BodyWorks online system. The registration office is responsible for following up on the student's booking.



### Step 3: Intake

Prior to starting the 6-week program, students will attend an intake session. This involves:

6. **Meeting the Pop-PA RA.** A research assistant will be on-site to greet the student, help them navigate the intake interview, and confirm that their intake paperwork/questionnaires has been completed.
7. **Meeting their trainer.** The Pop-PA RA will introduce the student to their assigned trainer.
8. **Intake interview and baseline fitness assessment.** Please follow standard BodyWorks intake procedures.
9. **Book the next session.** Help the student sign up for their next session

# THE INTERVENTION

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## How is Mind In Motion structured?

Mind in Motion is a 6-week exercise program. Students are invited to participate in 2x 1-hour exercise sessions per week. After 6-weeks, students will have the option to extend for an additional 6-weeks if they wish.

Students face many ups-and-downs during a typical term: some weeks are busy, some weeks are quiet. Reflecting this, the 6-week program is designed to be flexible. The program will run on a punch pass, with students provided with 12 individual sessions; they will have up to 9 weeks to complete sessions. While flexible, it is important to reinforce that Mind In Motion follows the CANMAT **exercise prescription**. Like other prescribed treatments, students need a sufficient “dose” to attain benefits. Students are encouraged to stick to the 6 weeks as closely as possible.

In addition to structured exercise sessions, students are encouraged to participate in a third, self-directed exercise session each week. This is to (1) help students reach CANMAT recommendations, and (2) encourage the bridge to independent self-managed exercise after Mind In Motion ends.

## How are individual sessions structured?

The 6-week exercise program is in the hands of the personal trainer. A typical program will include a combination of strength and aerobic training. Trainers may vary the program dependent on the student’s needs, interests, and abilities.

## How does depression affect exercise?

It is important for exercise providers to remain attuned to the needs of their student. Depressive symptoms can have wide impacts on capacity for exercise, including energy, enjoyment, and appetite. Additionally, studies have shown that people with depression perceive exercise to be more effortful vs. people without depression.

Every person with depression is a unique individual. It can be helpful to collaborate and strategize together with your student. Here are some suggestions to get you started:

- Be prepared to modify programming dependent on a student’s presentation. This does not mean “go easy” on your student. However, be aware that your student’s 100% can vary day-to-day. (Showing up can be a huge accomplishment.)
- Provide praise if they worked hard, tried something new, developed a skill, etc.
- During cool-down, ask your student about their week. If they anticipate a challenging or busy week, work with them to troubleshoot an exercise plan.

- Encourage students to reflect on how they feel after they finish their exercise session. For example, do they feel proud of themselves? Is there something they want to work on next time?
- Difficulties with exercise adherence is normal for people with depression. Expect your students to miss a few sessions, and be prepared to help them with this.
- Ensure your student has booked their next session before leaving the gym.
- If your student misses a session and you haven't heard from them ... reach out! Send an e-mail or give them a call.

It is important to remember that **exercise providers are experts at exercise** – not mental health. If a student is presenting with worrying symptoms, it is OK to refer back to Counselling Services for extra support.

### How else can exercise providers support students?

Mind In Motion is based on Self-Determination Theory. (Remember that exercise psych class you took in second year? Yes, *that* Self-Determination Theory!) SDT is a meta-theory of human behaviour that focuses on human needs and motivation. It identifies that people have three primary needs:

1. **Autonomy** – People need to feel in **control** of their own behaviour and goals.
2. **Competency** – People need to gain mastery and have a sense of **confidence** in their abilities/skills.
3. **Relatedness** – People need to experience a sense of belonging and **connection** with others.

SDT reminds us that the mental health benefits of physical activity are not only associated with the amount of exercise. *How activity is structured*, the *environment* it occurs in, and the *context* also matter!

Throughout the 6-week program, your role as a trainer is to create an environment which fosters competence, autonomy and relatedness:

1. Provide students with the opportunity to **take control of their own exercise program**.
2. **Boost confidence** in their ability to exercise.
3. **Foster connection** through creating a safe and welcoming PA environment.

How can you do this? See the next page for some ideas!

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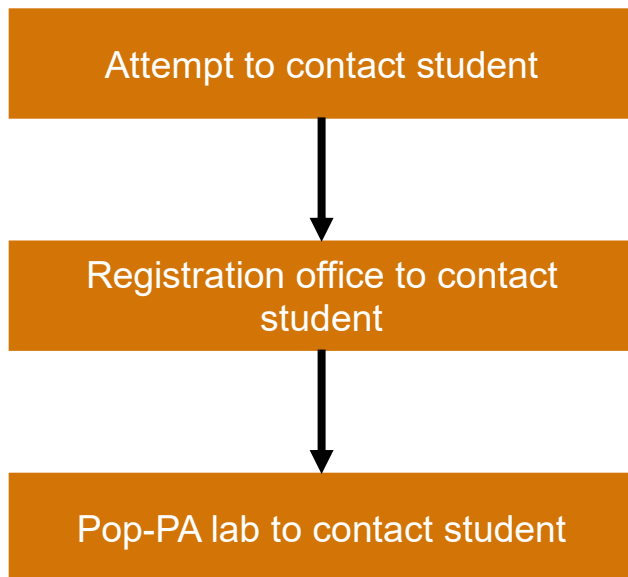
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Autonomy	Competency	Relatedness
<p><b>Goal:</b> Give students a sense of control over their exercise program, goals, and achievements.</p>	<p><b>Goal:</b> Boost confidence in students' ability to do the activity and take control of their own health.</p>	<p><b>Goal:</b> Foster a sense of connection through exercising with others in a pleasant environment</p>
<p><b>Strategies:</b></p> <ul style="list-style-type: none"> <li>• Work with the student to identify important and realistic goals. Setting goals which are attainable helps to build a sense of control (and also confidence!) in what they achieve</li> <li>• Encourage your student to complete 1 self-directed exercise session per week.</li> <li>• Students book their own exercise sessions at times that work for them.</li> <li>• Reinforce that students have choice in what types of exercise they are doing (within reason).</li> <li>• Reinforce that the student <i>chose</i> to participate and <i>chose</i> to attend session.</li> <li>• Reinforce that the student is helping their mental and physical health.</li> </ul>	<p><b>Strategies:</b></p> <ul style="list-style-type: none"> <li>• Start low and build up.</li> <li>• Start where the student is. Giving them activities that are too difficult will not boost confidence.</li> <li>• Ensure you communicate to students how they are improving.</li> <li>• Build on strengths and past successes.</li> <li>• Normalize setbacks! Make a plan to overcome them when it happens.</li> </ul>	<p><b>Strategies:</b></p> <ul style="list-style-type: none"> <li>• Share and celebrate achievements.</li> <li>• When possible, relate to your client. For example: You know the exercise can be hard - it's hard for you too! You know that scheduling around your course work is hard - you have to do it too!</li> <li>• Encourage students to exercise with friends or family.</li> <li>• If students are interested and provide consent, offer to connect them with others involved with Mind In Motion.</li> </ul>

## What is a drop-out?

Students are considered **lost to follow-up** if (1) they have not attended exercise sessions for 2 weeks and (2) have not had any contact with Mind In Motion.

Exercise providers can take steps to reduce loss to follow-up. Here are the steps to follow:



1. If you haven't heard from your student in 1 week AND they have missed their scheduled exercise sessions.
2. If you don't hear back from the student, ask the registration office to reach out. Provide the student with 1 week to respond and/or rebook.
3. If the student does not respond, notify the Pop-PA Lab. The RA (Cassandra, or other study personnel) will reach out.

# DISCHARGE

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## What happens at the end of the program?

At the end of the 6-week program, students will go through the following steps:

1. **Post-program fitness assessment.** BodyWorks trainers will run the student through a series of fitness tests in line with their initial fitness assessment.
2. **Post-program questionnaires.** A post-program (week 6) and follow-up (week 12) questionnaire will be administered to the student through REDCap.
3. **Post-program interview.** A Pop-PA RA will contact the student for a post-program interview. This interview is optional for the student.
4. **Discharge letter.** A BodyWorks will provide Counselling Services with an update letter.
5. **Final notice.** Individual trainers will write up the final notice, Andre will sign off and send back through the bodyworks UBC email to the Pop-PA Lab.

At the end of the 6-week program the student is eligible for a 6-week extension of personal training. If they are interested, it is BodyWorks' responsibility to notify the Pop-PA Lab of the extension. Questionnaires and interviews will remain on the same timeline (week 6 and week 12).

## RESEARCH

### Study Objectives

A **program evaluation** will be conducted by the Pop-PA Lab during the 2023-2024 year. This evaluation will serve two objectives: (1) To establish the feasibility of integrating exercise-based treatment for depression into campus mental health services, and (2) To explore the efficaciousness of delivering a 6-week exercise intervention to students. Ultimately, we are hoping to learn how Mind in Motion can be improved to support its long-term sustainability.

### Evaluation Framework

This evaluation includes process and outcome variables. Program implementation will be evaluated via the RE-AIM framework, which emphasises ecological validity (Biddle et al., 2021, p.310). It is designed to give special attention to essential elements which make programs sustainable, adoptable, effective, and evidence-based (see [www.re-aim.org](http://www.re-aim.org)).

The Pop-PA Lab and stakeholders will play the following roles in program evaluation:

Input	Program Evaluation			Outcome
	Activities	Output	Implementation outcome	
Pop-PA lab will provide support in the design and implementation of MIM through developing a referral system between UBC Counselling Services and UBC BodyWorks.	Pop-PA research team and providers working together to develop a partnership and sustainable exercise program on UBC campus for students with depression. Research team will provide training to providers, will assist with technical assistance for implementation, and will conduct a program evaluation.	Participants engage in MIM program: 2 sessions a week for 6 weeks, 1 hour/session.  Informed by SDT.  Exercise programming tailored to participant interests.	Hypothesized that participants will have improvement in depressive symptoms after the exercise treatment. Themes from qualitative interviews expected to give insight towards areas of improvement for future phases of MIM.	Results will inform improvements to future Mind in Motion programming; incorporation into the Kinesiology work integrated model for student learning opportunities.

### Measures

The study is a single-arm pre-post feasibility study, with mixed-methods data collection. Mixed-methods data will be collected including validated self-report symptom questionnaires from student participants (PHQ-9, GAD-7, IPAQ-SF). Qualitative data will be collected via semi-structured interviews with students, exercise professionals, and mental health providers at the intervention's conclusion.

### What is the impact?

Campuses present a unique environment to explore exercise-based interventions. On one hand, there is already established infrastructure, mental health professionals, and exercise professionals. On the other, campuses have high rates of mental illness, including depressive symptoms, and mental health services often have lengthy wait-lists. This provides an excellent opportunity to implement an exercise-based treatment for depression and to evaluate the effectiveness, sustainability, and feasibility in a university setting.

There is limited evidence on strategies for integrating exercise referral pathways into mental health care (Yates et al., 2020; DeJonge et al., 2021; Schmitter et al., 2020), particularly in a post-secondary setting. Mind In Motion specifically examines the development, implementation, sustainability, and cost-effectiveness of (1) an embedded exercise-based treatment program (2) in an optimized environment. This research has implications for multiple facets of public health, including when and how to implement health promotion strategies, collaboration efforts, and efficacy of unique PA initiatives in a mental health context.

Most immediately, this program may potentially benefit students with depression by providing them with innovative, non-stigmatizing, and accessible care. Given lengthy wait lists for mental health care, it may also reduce demands on conventional campus-based mental health services.

If successful, the program will expand in 2024-2025 to include a kinesiology work-learn training program. This program will both increase capacity to deliver Mind In Motion to a greater number of at-need students (i.e., increased availability of exercise providers), while providing senior-level kinesiology students with a unique training experience (i.e., in exercise-based treatment for depression).

In 2025-2026, it is anticipated that BodyWorks will move to a new fitness facility in the UBC Gateway Building. This state-of-the-art facility will collect detailed information on students' exercise engagement, and thus lend insight into the potential mechanisms of exercise-based treatment for depression.

In short, Mind In Motion will potentially benefit UBC students and campus mental health care services; contribute to student training experiences; and contribute to our understanding of exercise-based treatments for depression. If successful, this model of care may be adapted to other campus settings and the community more generally.



## WORKS CITED

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- Biddle, S., Mutrie, N., Gorely, T., & J., F. G. E. (2021). Section IV Physical Activity Behaviour Change. In *Psychology of physical activity: Determinants, well-being and interventions* (pp. 308–310). essay, Routledge.
- Canadian Association of College & University Student Services and Canadian Mental Health Association (2013). Post-Secondary Student Mental Health: Guide to a Systemic Approach. <https://healthycampuses.ca/wp-content/uploads/2014/09/The-National-Guide.pdf>.
- DeJonge, M. L., Jain, S., Faulkner, G. E., & Sabiston, C. M. (2021). On campus physical activity programming for post-secondary student mental health: Examining effectiveness and acceptability. *Mental Health and Physical Activity*, 20, 100391. <https://doi.org/10.1016/j.mhpa.2021.100391>
- Faulkner, Trinh, & Arbour-Nicotopoulos (2016) Chapter 13: Physical Activity and Mental Health. In P. Crocker (3rd Edition), *Sport and Exercise Psychology* (pp. 341-365). A Canadian Perspective: Pearson
- Glowacki, K., Arbour-Nicotopoulos, K., Burrows, M., Chesick, L., Heinemann, L., Irving, S., Lam, R. W., Macridis, S., Michalak, E., Scott, A., Taylor, A., & Faulkner, G. (2019). It's more than just a referral: Development of an evidence-informed exercise and depression toolkit. *Mental Health and Physical Activity*, 17, 100297. <https://doi.org/10.1016/j.mhpa.2019.100297>
- Glowacki, K., & Faulkner, G. (n.d.). Exercise and depression toolkit. <http://csep.ca/home>
- Heissel, A., Heinen, D., Brokmeier, L. L., Skarabis, N., Kangas, M., Vancampfort, D., Stubbs, B., Firth, J., Ward, P. B., Rosenbaum, S., Hallgren, M., & Schuch, F. (2023). Exercise as medicine for depressive symptoms? A systematic review and meta-analysis with meta-regression. *British Journal of Sports Medicine*, 1–10. <https://doi.org/10.1136/bjsports-2022-106282>
- Lubans, D., Richards, J., Hillman, C., Faulkner, G., Beauchamp, M., Nilsson, M., Kelly, P., Smith, J., Raine, L., & Biddle, S. (2016). Physical activity for cognitive and mental health in youth: A systematic review of mechanisms. *Pediatrics*, 138(3). <https://doi.org/10.1542/peds.2016-1642>
- Ravindran, A. V., Balneaves, L. G., Faulkner, G., Ortiz, A., McIntosh, D., Morehouse, R. L., Ravindran, L., Yatham, L. N., Kennedy, S. H., Lam, R. W., MacQueen, G. M., Milev, R. V., & Parikh, S. V. (2016). Canadian Network for Mood and Anxiety Treatments (CANMAT) 2016 clinical guidelines for the management of adults with major depressive disorder: Section 5. Complementary and Alternative Medicine Treatments. *Canadian Journal of Psychiatry*, 61(9), 576–587.
- Singh, B., Olds, T., Curtis, R., Dumuid, D., Virgara, R., Watson, A., Szeto, K., O'Connor, E., Ferguson, T., Eglitis, E., Miatke, A., Simpson, C. E., & Maher, C. (2023). Effectiveness of physical activity interventions for improving depression, anxiety and distress: an overview of systematic reviews. *British Journal of Sports Medicine*, 1–10. <https://doi.org/10.1136/bjsports-2022-106195>

## **APPENDIX**

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### **Exercise and Depression Toolkit**

Can be downloaded at <https://exerciseanddepression.ca/toolkit/>.

## Referral script for advisors

### Recruitment Script for Wellness Advisors

**Counsellor:** Do you currently exercise- engage in activity that is structured and planned with the intention of maintaining or improving physical fitness?

*Response: Yes/No*

[if No: skip to bullet point]

[if Yes] **Counsellor:** That's great you do activity. How many days per week?

*Response: 1-2 or 3 or more*

Note: \*If the individual talks about active travel (commuting by physical activity) or work related physical activity they can still be included.

[If 3 or more] **Counsellor:** Keep it up. Exercise is great for your mental and physical health. Since you exercise [number of times 3 or more] times a week, you are not eligible for the program at this time.

➤ [If less than 3 or NO to first question] **Counsellor:**

There is evidence that exercise can be helpful for improving mood, increasing energy levels, and reducing feelings of stress and anxiousness. UBC is offering a free exercise program designed for people seeking mental health counselling on campus called Mind in Motion as part of a research project. It involves two supervised sessions a week at BodyWorks on campus and lasts 6 weeks, with the option to continue after for an additional 6 weeks if you like it. Here is an information card that tells you more about the program. [Provide information card- go through the card with them]. Does this sound like something you are interested in?

*Response: Yes/No*

[If No] **Counsellor:** If you would like, I can fill out a referral form with you now for the program. You can participate in this program while also receiving other forms of mental health treatment on campus if that is what you feel is best for you. Would you like me to refer you to this program?

*Response: Yes/No*

[If No] **Counsellor:** No problem, let's move on.

[if Yes] **Counsellor:** [fill out referral form with student and send referral]

Now that I have sent a referral, a Bodyworks Personal Trainer will contact you within 48 hours to provide you will more information if you are interested. Would you prefer to be contacted by phone or email? They will answer any questions you may have about the program and will help you sign up for your first session.

# HOME BASED PROFESSIONAL SERVICES

*Business Plan*

## Checklist for MIM: Counselling Services

Participant Name/ ID:

DOB:

Referral Date:

Date Completed (MM/DD/YYYY)	Task
	Assessed Participant Interest
	Checked eligibility for Mind in Motion
	Filled out Referral Form with Student
	Faxed Referred to BodyWorks
	Gave Student paper information card on Mind in Motion
	Completed any necessary charting about appointment and made note of referral

## Checklist for MIM: BodyWorks

Participant Name/ ID:

DOB:

Referral Date:

Date Completed (MM/DD/YYYY)	Task
	Review the referral form, email the student within 2-5 work days with the Get Active Questionnaire (GAQ)
	Review GAQ, make sure the student is physically eligible
	If required: request medical clearance
	Email participant introduction letter, CC Cassandra
	Registration office registers student and confirms booking of intake interview
	Host initial session with the student
	The trainer will then make sure the student is signed up up for their first session of the 6-week program, assist in the process if needed
	12 sessions complete with student (6 weeks, 2 sessions per week)
	When there are 4 sessions remaining, update Cassandra
	At the end of week 6 (12 sessions), a questionnaire will be sent (redcap)
	Offer student additional 6-week program extension
	Provide program completion status to Cassandra for communication back to counselling services
	At week 12, 6-week follow up questionnaire to be sent regardless of potential 6-week program extension

## Checklist for MIM: Pop-PA lab

Participant Name/ ID:

DOB:

Referral Date:

Date Completed (MM/DD/YYYY)	Task
	Received notice of new participant from Bodyworks, entered participant information into Redcap
	Cassandra to meet with participant during their initial intake session with Bodyworks, gauge interest in interviews and explain participation in the study
	Baseline questionnaire date uploaded into redcap
	Week 6 questionnaire date uploaded into redcap
	Contacted student to ask and potentially arrange interview date
	Host interview with student if interested and consented
	Week 12 questionnaire date uploaded into redcap
	Send participant discharge letter to counselling services

# HOME BASED PROFESSIONAL SERVICES

Business Plan

## Counselling referral form

<b>REFERRING PROVIDER:</b>		<input type="checkbox"/> Wellness Advisor- Brock Hall <input type="checkbox"/> Mental Health Provider- Annex <input type="checkbox"/> Mental Health Provider - Brock Hall <input type="checkbox"/> Mental Health Provider - Embedded	
Name:		E-mail:	
Embedded Site if applicable: _____		Telephone:	
<b>STUDENT INFORMATION:</b>		DOB:	Sex: <input type="checkbox"/> Female <input type="checkbox"/> Male <input type="checkbox"/> Intersex
First name:	Middle name:	Last name:	
Telephone:		E-mail:	
<b>ELIGIBILITY:</b>		<b>INELIGIBILITY:</b>	
<input type="checkbox"/> Current UBC student (part or full time)		<input type="checkbox"/> Acute risk of harm to self or others	
<input type="checkbox"/> Age 18+ years		<input type="checkbox"/> Current or historic eating disorder	
<input type="checkbox"/> Can communicate in English		<input type="checkbox"/> Active alcohol or substance use disorder	
<input type="checkbox"/> Attend UBC-Vancouver Campus		<input type="checkbox"/> Serious mental illness	
<input type="checkbox"/> Mild-moderate depression OR PHQ-9 =10-19		<input type="checkbox"/> Severe depression OR PHQ $\geq$ 20	
<input type="checkbox"/> Exercise $\leq$ 2 times/week OR $\leq$ 90 minutes/week		<input type="checkbox"/> Other mental health diagnoses / symptoms that you feel makes the student a poor fit for exercise	
<b>MENTAL HEALTH DIAGNOSIS IF KNOWN:</b>		PHQ-9 score:	GAD-7 score:
<b>Symptoms consistent with:</b>			
<input type="checkbox"/> Major depressive disorder		<input type="checkbox"/> Bipolar I disorder <input type="checkbox"/> Bipolar II disorder	
<input type="checkbox"/> Generalized Anxiety		<input type="checkbox"/>	
<input type="checkbox"/> Other Anxiety- disorder:		<input type="checkbox"/> Other psych. Dx:	
<input type="checkbox"/> Other depressive disorder:		<input type="checkbox"/> Other psych. Dx:	
<b>TREATMENT:</b>		Currently receiving treatment for depression: <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> Waitlisted	
Current mental health supports:			
<input type="checkbox"/> <b>Consent to Share Information:</b> I hereby consent to sharing of relevant information between Counselling Services and Mind in Motion Study to facilitate referral.			
Student Signature:		Date:	
Referred by: Signature:		Date:	
Supervisor Signature (if appropriate):		Date:	
<input type="checkbox"/> I acknowledge that this referral is to the MIND IN MOTION Study, coordinated through the UBC School of Kinesiology (Research Ethics #H17-02498-A011).			
<input type="checkbox"/> I have discussed this referral with the student and have provided them with the information letter.			
<b>Signature of referring provider</b>		<b>Date</b>	

## MIM referral card

### You're Invited To:



Your counsellor has referred you to a physical activity program.  
**Physical activity** has been shown to help people:

- **Improve their mood**
- **Increase their energy levels**
- **Sleep better**
- **Increase their ability to focus**
- **Reduce feelings of stress and anxiousness**

**Mind in Motion** is a program designed specifically to help UBC students seeking mental health services or counselling on campus to do more physical activity!

**A Bodyworks Personal Trainer will be in contact with you soon.**

If you have any questions  
please call or email:

**[pop\\_pa.lab@ubc.ca](mailto:pop_pa.lab@ubc.ca)**

**Who is running MIND IN MOTION?** MIND IN MOTION is being coordinated by UBC Counselling Services in collaboration with the Population Physical Activity Lab and UBC BodyWorks Gym.

**Why exercise?** In 2016, the Canadian Network for Mood and Anxiety Treatments (CANMAT) identified exercise as a **first-line treatment** for mild-moderate depressive symptoms, and an **adjunctive treatment** for moderate-severe depressive symptoms. Exercise is about as effective as medication or therapy in treating depressive symptoms.

**What is MIND IN MOTION studying?** Even though exercise is recommended as a treatment, it is rarely offered to people experiencing depressive symptoms. MIND IN MOTION is interested in whether on-campus exercise programming is feasible and effective.

**What does the exercise program involve?** If you sign up for the program, you will work with a qualified exercise provider to develop a personalized exercise program. The program with **two 1-hour sessions per week for 6 weeks, with the option of extending for an additional 6 weeks**. Booking your sessions is done online and you can pick times that suit your schedule.

**What does the study involve?** You will be asked to complete questionnaires before, during, and after the exercise program. These questionnaires will help us understand the impact of MIND IN MOTION on your mental and physical health. You will also be asked to participate in an individual interview after the program.

**How will participation affect my health care?** It won't! Participating in MIND IN MOTION is entirely voluntary and will have **no impact** on your regular health care.

**What will you do with my health information?** Your privacy is our top priority. The UBC Mind in Motion research team and Bodyworks partners will keep your information strictly confidential. With your permission, we will provide your referring provider with updates summarizing your participation in this program. With this referral, your name, birthday, psychological diagnosis, and relevant medications will be sent securely to the lead BodyWorks staff to begin your enrollment process. This information helps to make sure that you are eligible for this type of exercise program.

**What's next?** We will review your referral document and contact you shortly for eligibility screening. Please expect a response in 5-10 business days.

**Who can I talk to for more information?** Please contact our study team at [pop\\_pa.lab@ubc.ca](mailto:pop_pa.lab@ubc.ca)

**Who is in charge of this research?** The principle investigator for this research study is Dr. Guy Faulkner, Ph.D., School of Kinesiology, UBC.



## Poster







Would you like to participate in a **6-week FREE exercise program** on UBC campus?

 Researchers at UBC, in partnership with Bodyworks gym are recruiting participants. **Ask your Mental Health Provider or Wellness Advisor if you are eligible!**



Principal Investigator: Dr Guy Faulkner, [guy.faulkner@ubc.ca](mailto:guy.faulkner@ubc.ca).

## Discharge post program letter

Dear PROVIDER NAME,

Re: STUDENT NAME, DOB

Thank you for referring NAME to Mind In Motion. Mind In Motion is a 6-week exercise program for UBC students with clinically significant depressive symptoms. Students are invited to participate in 2 exercise sessions per week, with all sessions supervised by a CSEP-qualified exercise professional. Students are also encouraged to participate in 1 independent exercise session per week. This is in alignment with CANMAT Clinical Guidelines and is used to help support a bridge to independent self-managed exercise after the program ends.

NAME participated in a total of X of 12 exercise sessions. From pre- to post-, they reported the following changes:

### Key measures from Pre to Post

Measure	Pre	Post
PHQ-9		
GAD-7		
Flourishing Scale (FS)		
Physical Activity (IPAQ-SF)		
Task Self-efficacy (social cognitive measure)		

Overall, NAME increased their fitness level and self-reported a decrease in both depressive and anxiety symptoms. As well, they indicated an increased sense of wellbeing (state of flourishing) and improved task self-efficacy.

BRIEF PERSONAL COMMENT FROM PROVIDER GOES HERE.

If you have any questions, please do not hesitate to contact us at [ckellcat@student.ubc.ca](mailto:ckellcat@student.ubc.ca) from the Pop-PA lab. We wish NAME the best in their future endeavors.

Sincerely,

PROVIDER NAME