

SCI Step Together

**An 8-week physical activity program
created for individuals with
spinal cord injury who walk.**



cdpp

Canadian Disability Participation Project

Le projet canadien sur la participation sociale
des personnes en situation de handicap

About SCI Step Together

SCI Step Together

SCI Step Together is an 8-week program created for individuals with spinal cord injury (SCI) who walk to become more physically active. The program is also to help people have better or higher quality experiences in physical activity. The program is based on the best research evidence specifically for people with SCI who walk. SCI Step Together was developed by scientific research experts, individuals with lived experience, a SCI community organization, and Curatio (now known as RxPx Inc.).

Why We Made This

People with SCI who walk participate in much less physical activity than individuals with SCI who use manual wheelchairs. However, there has been very little research looking at physical activity for people with SCI who walk and there are no programs to help improve physical activity for this group. This is the first program to support people with SCI who walk to change their physical activity behaviour.

The Purpose

SCI Step Together was created to support people with SCI who walk to have more and better physical activity experiences. In this program, you will learn about the conditions that lead to better quality experiences in physical activity, the SCI physical activity guidelines and benefits, how to track your activity and set goals, planning for activity and how to cope with barriers that arise, how to feel more confident about yourself, skills for physical activity you might need, and resources to support your physically active lifestyle moving forward.

Adapt It

The 8-week program was originally created as a mobile application for your smartphone, and you can still access the Curatio Stronger Together app on your smartphone in the “SCI Step Together” community: <https://apps.apple.com/ca/app/curatio-stronger-together/id1517935369>. The app provides more tools like health coaching, peer support, and health and mood tracking. We decided to put the modules online so others can access the educational content on more kinds of devices. We hope that you take what you need from this program and adapt the information as you see fit.

Research References

- Developing the program:

Lawrason, S. V. C., Brown-Ganzert, L., Campeau, L., MacInnes, M., Wilkins, C. J., & Martin Ginis, K. A. (2022). mHealth physical activity intervention for individuals with spinal cord injury: Planning and development processes. *JMIR Formative Research*, 6(8), e34303. doi:10.2196/34303.

- Assessing the impact of the program:

Lawrason, S. V. C., & Martin Ginis, K. A. (2023). Evaluating the feasibility, acceptability, and engagement of a mHealth physical activity intervention for individuals with spinal cord injury: A randomized controlled trial. *Journal of Sport and Exercise Psychology*, 45(2), 61-76. doi:10.1123/jsep.2022-0087

Authors

The SCI Step Together program was created in 2021. The modules were published online in 2023. The authors of the program include:

- Dr. Sarah Lawrason, PhD, University of British Columbia
- Dr. Kathleen Martin Ginis, PhD, University of British Columbia

Acknowledgements

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- Lysa Campeau, RxPx Inc.
- Megan MacInnes, Community Research Partner
- CJ Wilkins, Community Research Partner



“SCI Step Together” – Overall 8-Week Framework:

Module 1: Quality Participation, Autonomy, and Competence	Week 1: Quality physical activity participation Week 2: Physical activity guidelines and benefits Week 3: Self-monitoring and goal setting
Module 2: Autonomy and Competence	Week 4: Action planning Week 5: Coping planning
Module 3: Competence	Week 6: Skills Week 7: Beliefs about capabilities Week 8: Program recap and providing tools for independent use

You can find this information and more in the Curatio Stronger Together app on your smartphone in the “SCI Step Together” community: <https://apps.apple.com/ca/app/curatio-stronger-together/id1517935369>

WEEK 6 – Skills

1. Week 6 – Skills

Welcome to Week 6 of SCI Step Together. Module 1 was all about exploring quality participation in physical activity, understanding the physical activity guidelines and benefits, and goal-setting and self-monitoring our behaviour. In Module 2, we looked at action and coping planning physical activity. It’s now time to jump into the final module, which is all about building our skills and confidence to be physically active!

A quick reminder that this program has been developed by the SCI Action Canada Lab at the University of British Columbia in collaboration with Curatio, to help you stay strong throughout your health journey.

Week 6, here we come!



2. Week 6 – Educational – Skills

This week we are going to look at strategies to help us become active in our homes.

Staying active at home may seem impossible, however, with the right tools and information, making small changes to your home-based exercise routine can go a long way. In this section, we look specifically at how you might be able to incorporate some **strength/resistance-based** training in your current space.

Safety first! It is important that you are in a safe environment and know how to monitor yourself while exercising.

Preparing Yourself

- **Talk to your doctor** – If you have not done exercise before, make sure you speak with your general practitioner about your intentions to exercise at home.
- **Be your own monitor** – When you are exercising alone, you are responsible for your safety and well-being. Listening to your body is imperative. Some discomfort or muscle soreness is common. However, you should not be experiencing any sharp pain or prolonged soreness.
- *Before beginning exercise, please familiarize yourself with condition specific adverse signs and symptoms. For example, if your SCI is above T6, you should monitor for signs of autonomic dysreflexia. Do not exercise when unwell. If there is dizziness, shortness of breath, chest pain, nausea or vomiting, or muscle and joint pain during exercise, stop the activity and seek medical advice as soon as possible*
- **Pace yourself**– Try and start the program slowly, and gradually increase your intensity over each workout. This will help minimize pain you might feel and help to prevent any injuries. Set small goals for each new session.
- **Functional fashion** – Ensure you are wearing comfortable clothing that lets you move freely. Avoid wearing items that have long tassels or ties that can get caught easily.

Preparing Your Environment

- **Check your space** –Find an appropriately sized space where you can complete your workout. A 4'x4' area will do!
- **Rehydrate** – Drink lots of fluids while you are exercising.
- **Refuel** – if you are prone to low blood sugar, keep a sweet snack or juice nearby in case you feel dizzy or unwell.
- **Set up your space** – Place all the items you will be using for your workout near you. This way, you will be able to keep a good rhythm and flow between exercises.

Setting Up for Exercise

If traditional exercise equipment is not suitable or available, here are some alternatives:

- **Weights:** Cans, large/small bottles (add liquid for more weight), body weight, resistance bands [e.g., www.treadmillfactory.ca 14-piece power pack]
- **Stretching Aids:** Resistance band, towel, wall, cane

Additional equipment:

- **Common Adapted Exercise Equipment:** Grip aids, tensors (for tensoring hand for grip assistance), wrist weights, medicine balls, pulleys/cables, free weights
- **Specialty Equipment:** Boxing gloves, arm ergometer (arm bike), Vita Glide, Nu Step, Functional Electrical Stimulation (FES), motorized recumbent bike, elliptical, treadmill, road bike, mountain bike, e-bike (electrical bike), sit ski, traditional skis, outrigger poles for skiing

Using Exercise Bands

- Before using the band, inspect it to ensure that there are no tears or small holes. Make sure that the band is wrapped firmly around your hands. Adjust the length of the band so that there is just enough slack and exercise resistance so that you can go through the full range of motion.
- You can vary the resistance by adjusting your hand position on the band. To increase resistance (for example, when an exercise becomes easier), grasp the band closer to the center so to decrease the band's length. You can also try folding the band in half to increase the resistance. To decrease resistance, grasp it closer to the ends.
- Sometimes when you are working with exercise bands, they creep up and end up out of place. Each time you use an exercise band try to anchor it to something stable such as a doorknob.
- Before beginning an exercise give the exercise band a few tugs to ensure the sturdiness of your anchor.
- If you do not own, or have access to exercise bands, some household items can do the part. Yoga pants that have a stretch, pantyhose, or even a robe tie can do.



Starting to move

- **Warm-Up** - Remember to do light endurance work before your strength or flexibility exercises to ensure your muscles are warm. A warm-up should last 5-10 minutes. Examples include a brisk walk around the block, standing marches, arm circles, boxing, dynamic stretching, and many more.
- **Resistance Training** - We recommended that you start with what you can. The goal is to do 3 sets of 8-10 repetitions; however, once you feel comfortable you can adapt and modify the sets and repetitions to suit your needs and goals. In determining the right amount of weight, you should be able to do 8-10 repetitions with good form. It should feel challenging but manageable. If you are not able to do 8-10 repetitions with good form, you may be using too much resistance.
- It is important to work the left and right sides of the body as well as the front and back to maintain muscle balance and prevent any injuries. It is also recommended to start with large muscle groups such as your chest and back muscles first, and end with the smaller muscle groups such as the muscles in your arms.
- **Cool-Down** - Complete some gentle stretching at the end of your routine and ensure that your breathing has returned to normal before you stop.

Thinking ahead:

- For important fitness benefits, try to schedule at least two strength training sessions per week, consisting of **3 sets of 8-10 repetitions** of each exercise for each major muscle group.
- Avoid exercising the same muscle groups two days in a row. You can alternate between upper and lower body days to prevent overuse.
- Avoid doing your strength training program 3 days in a row.

Please go to the following resources for examples of resistance exercises.

Reliable places to get information

- SCI Action Canada / Active Homes
<https://sciactioncanada.ok.ubc.ca/resources/active-homes/> Here you will find videos of basic resistance exercises, a Home Strength Training Guide for People with Paraplegia, and a Home Strength Training Guide for People with Tetraplegia.
- Inclusive 8-minute workout:
<https://www.youtube.com/watch?v=q0ttPm8LSEk&list=PLwMOBYmISHaPIArTOC4JBZfeuU7LN7KVJ>
- Standing workout for beginners:
<https://www.youtube.com/watch?v=eLCIKvN9Qag>

Other Ideas for Physical Activity

Here are some other ideas for physical activity that you might find attractive! Remember, try to pick something that provides you with quality participation in physical activity (autonomy, belongingness, challenge, engagement, mastery, meaning). These ideas for activities are directly from other individuals who walk with SCI:

- **Active transportation:** Walk or wheel to work, school, or while running errands
- **Everyday activities:** Standing, stretching, calf raises while doing dishes, taking the dog out for a walk or roll, playing with your kids, parking further away from your destination and walking the rest of the way, walking at the mall (or indoor track) during bad weather, holding walking meetings
- **Aerobic activities:** Walking, jogging, road biking, mountain biking, e-biking, swimming, follow along an exercise video, play recreational sports, dancing, curling, bocce, rowing machine, paddle ergometer, elliptical,
- **Strengthening activities:** Resistance bands, lift weights (or alternative items), use cable pulleys, body weight exercises, Yoga, Pilates, Tai Chi
- **Sports:**
 - o Low cost: Table tennis, swimming, athletics, basketball, bocce, curling, bowling, dance, golf, boxing, martial arts, softball, tennis, volleyball, ice-skating
 - o Specialized equipment: Rock climbing, mountain biking, stand-up skiing, sit skiing, Nordic skiing, fencing, power lifting, waterskiing, sledge hockey, sailing, wheelchair rugby, horseback riding, hiking, canoeing, surfing, kayaking, rowing
- **Other fun activities:** ATVing, gardening, shovelling, outdoor activities like building a fire, maintenance activities like organizing your garage, artwork like painting or sculpture



3. Week 6 – Additional Supports

Here are some reliable resources you can use to learn more about staying active at home.

Additionally, you can always also contact the members of your health team (your family doctor, nurse practitioner, etc.), or call 811 (in BC) to speak to a pharmacist or nurse right away.

Please go to the following resources for examples of resistance exercises.

Reliable places to get information

- SCI Action Canada / Active Homes
<https://sciactioncanada.ok.ubc.ca/resources/active-homes/> Here you will find videos of basic resistance exercises, a Home Strength Training Guide for People with Paraplegia, and a Home Strength Training Guide for People with Tetraplegia.
- Inclusive 8-minute workout:
<https://www.youtube.com/watch?v=q0ttPm8LSEk&list=PLwMOBYmISHaPIArTOC4JBZfeuU7LN7KVJ>
- Standing workout for beginners:
<https://www.youtube.com/watch?v=eLCIKvN9Qag>



4. Week 6 – Top Takeaways

Week 6 done and dusted! What was your biggest learning from this week? Was there something actionable you started doing this week? Do you feel more confident about starting a new exercise routine, like strength training at home? Until next week, we are sending you healthy wishes and warm regards.

WEEK 7 – Confidence

1. Week 7 - Identifying Barriers to Physical Activity - Welcome & Overview

Welcome to Week 7! We hope you were able to try some new activities last week. This week, we are going to explore how to improve your confidence in your new physical activity skills.

A quick reminder that this program has been developed by the SCI Action Canada Lab at the University of British Columbia in collaboration with Curatio, to help you stay strong throughout your health journey.

Here we go!



2. Week 7 – Educational – Confidence

What is confidence?

What does it mean to feel confident in physical activity? When you feel **confident**, you have a strong belief in your capability to perform physical activity. Confidence affects how you feel, think, and behave. When you approach physical activity with a strong sense of confidence, you will be more invested in the activity and be more likely to put more effort in. A strong sense of confidence enhances your well-being and facilitates your motivation and effort. This also leads you to approach difficult tasks like physical activity as challenges to be mastered rather than threats to be avoided.

How to build up your confidence

Past (mastery) experiences

When you successfully carry out physical activity, you believe that you have the capabilities necessary to repeat the behaviour. **Past successes** have the **most** important influence on confidence in doing physical activity in the future. Think about times in the past where you've had a positive experience in physical activity. How did you feel? What were you doing and why? Who were you with? Did you experience any of the elements of quality participation (belongingness, autonomy, challenge, meaning, engagement, mastery)? Before you try your next physical activity session, think about how you can recreate that sense of mastery or accomplishment.

Set up the opportunity for mastery experiences by increasing the frequency of positive physical activity experiences. For example, **gradually increase** the frequency and intensity of the activity – do not start with the maximum effort from the start. This might mean trying to achieve the starting level of the physical activity guidelines for persons with SCI rather than the advanced level. Find activities that you enjoy and maximize your chance of participating in these activities. You can find a list of activities in the post above! Remember, your physical activity experiences are unique to you – do what makes you feel good.

Positive self-talk

We are usually engaging in some type of **“self-talk”** – these are the ideas we tell ourselves about our capability in an activity. When our self-talk is positive, we will have more confidence in doing physical activity. When our self-talk is negative, we will have less confidence in doing physical activity. You engage in self-talk before and during physical activity. Ask yourself, “is my self-talk helping or hindering me?”

Try changing your self-talk in physical activity to be more positive. The first step is **recognizing** your self-talk – perhaps write down what you say to yourself. An example of negative self-talk might be: “I don’t want to be here”, “This exercise is too hard”, or “I’m worried I won’t be good at it”. The second step is to **stop the negative thoughts**. Try to cue yourself by saying “stop” silently to yourself out loud. The third step is to **challenge those thoughts**, determine why they might be irrational, and change them to a more positive message. Focus on what you can do!

Below are some examples of changing negative self-talk to positive self-talk:

Negative self-talk	Positive self-talk examples
I can't do this, it's too hard	This is challenging, but I am strong I don't have to do this perfectly I am resourceful, or others will help me
I'm not as good as...	What can I learn from...? I'm my own person I have my own strengths
I'm a failure	I learn from my mistakes I trust myself to succeed I enjoy adapting and growing with change



1. Week 7 – Additional Supports

Here are some reliable resources you can use to learn more about staying active at home.

Additionally, you can always also contact the members of your health team (your family doctor, nurse practitioner, etc.), or call 811 (in BC) to speak to a pharmacist or nurse right away.

Positive self-talk: <https://www.winona.edu/resilience/Media/Self-Talk-Worksheet.pdf>



2. Week 7 – Top Takeaways

You’ve finished Week 7, nice work! Did you have any AHA moments this week or any big learnings? Was it helpful to think about how to increase your confidence through positive self-talk? Next week, we are going to wrap up the program, so stay tuned!



WEEK 8 – Program Re-Cap

1. Week 8 - Welcome & Overview

Hello again and welcome to Week 8, the final week of the program! Can you believe it's been 8 weeks? We certainly find it incredible.

We have some goodies for this 8th week. We will jump into an overview of the topics discussed each week. We hope you can use this recap as a time to reflect on all your progress and to identify or remind yourself of tips and strategies you can use to keep going with your physical activity goals and plans.

A quick reminder that this program has been developed by the SCI Action Canada Lab at the University of British Columbia in collaboration with Curatio, to help you stay strong throughout your health journey.

Here we go!



2. Week 8 - Educational - Program Recap

Congratulations! You have now made it through all the educational content of this 8-week program. We know it can be a lot to absorb – so this week we are going to do a light overview of the topics discussed each week. Use this recap as a time to reflect on all your progress and to identify or remind yourself of tips and strategies you can use to keep making progress with your physical activity goals and plans.

In the **first Module**, we focused on defining quality participation in physical activity, introduced the physical activity guidelines for individuals with SCI, understanding the benefits of physical activity, and self-monitoring and goal setting for physical activity.

As a reminder – we define physical activity as any bodily movement that burns energy and increases heart rate and breathing. Physical activity can be experienced as part of recreation and leisure (e.g., sports or planned exercise), transportation (e.g., walking), at home (e.g., household chores), and many other parts of daily living.

Quality participation in physical activity is defined as a person's broad subjective evaluation that their physical activity involvement is (or has been) satisfying, enjoyable, and generates personally-valued outcomes. Quality experiences in physical activity might contain building blocks like autonomy, belongingness, challenge, engagement, mastery, and meaning.

Most importantly, adults with a SCI achieve important health benefits from being physically active.

Week 1: Quality physical activity participation is important for having positive experiences and maintaining participation. Quality physical activity participation consists of feelings like autonomy, belongingness, challenge, engagement, mastery, and meaning. Your experiences can change depending on day, time, type of activity, and much more. Try focusing on feelings that are meaningful and important to you. You might have better experiences by modifying some of the factors we listed related to personal (e.g., body functions/structures), social (e.g., group environment), program (e.g., safe activities), and physical (i.e., accessibility) factors. Having quality participation in physical activity is essential to enjoying movement!

Week 2: The physical activity guidelines for individuals with SCI are evidence-based recommendations for achieving optimal health benefits. There is a starting level and an advanced level – consider where you are in your fitness before picking a goal. The guidelines also consist of aerobic (i.e., cardio) and strength-training activities, and differentiate based on the intensity (light, moderate, and vigorous). Try physical activities that you enjoy at various intensities. You will experience numerous health benefits from engaging in physical activity. These include, but are not limited to physical benefits (e.g., better sleep, improved mood), benefits to well-being (e.g., improved quality of life), social benefits (e.g., feelings of belongingness), and benefits to brain health (e.g., feeling calmer).

Week 3: We introduced SMART (specific, measurable, attainable, realistic, time-based) goal planning. Remember to write down your goals in the app under the "My Info" tab. Try to set goals that you want to achieve and that enhance your quality participation. As well, we touched on the importance of self-monitoring as a method to recognize your current state of physical activity. This helps to make challenging, but achievable physical activity goals. You can self-monitor in the app in the Health Tools section or in your own calendar.

After building a strong knowledge base for physical activity, **Module 2** pivoted to focus on concrete steps for developing action plans and problem solving when barriers arise.

Week 4: Action planning and scheduling strategies were discussed. Making detailed plans – stating where, when, what, and for how long, you are going to be active can help you meet your goals. Remember to incorporate activities that provide you with a sense of quality participation.

Week 5: We discussed how to overcome barriers by using coping planning. Coping planning involves thinking of solutions to the barrier before it happens. As well, some barriers cannot be overcome on your own, and may require additional support from those around you. We outlined how you might be able to pivot your action plan so it fits with your body, motivation, and enjoyment.

In **Module 3**, we focused on strategies to build skills and confidence in physical activity. While this 8-week program is coming to an end, it is only the beginning of your physical activity journey!

Week 6: We presented tips for setting up an exercise space at home. The importance of a proper warm-up and cool-down were discussed. Exercise bands were also covered. Resistance band exercises are great for strength training, especially in small spaces. We also provided a bunch of other interesting activities that might work for you!

Week 7: We talked about the role of confidence in doing physical activity. Reflecting on your past experiences in physical activity and engaging in positive self-talk might help build yourself up for enjoyable participation!

So, there we have it, 8 weeks of content summed up! At the end of the day, making SMART goals, with good action plans and self-monitoring, are at the base of your success. Focus on activities that provide you with a sense of quality participation, so you can maintain your involvement for a long time. Remember that you are not alone in this journey. We are stronger together. Take time to check in with your peers in this community and see how they are progressing. You can all help each other meet your individual goals!



3. Week 8 - Additional Supports

Here are some reliable resources you can use to learn more about physical activity.

Additionally, you can always also contact the members of your health team (your family doctor, nurse practitioner, etc.), or call 811 (in BC) to speak to a pharmacist or nurse right away.

Physical Activity Guidelines for Adults with Spinal Cord Injuries: <https://csepguidelines.ca/guidelines/physical-activity-guidelines-for-adults-with-spinal-cord-injury/>

Sport and Exercise Resources

<https://cdpp.ca/resources-and-publications/sport-exercise>

Set SMART goals:

<https://www.healthlinkbc.ca/healthy-eating-physical-activity/being-active/smart-goal-setting#:~:text=Goals%20should%20be%20SMART%20%E2%80%93%20specific,%2C%20realistic%2C%20and%20time%20frame.&text=If%20you%20set%20yourself%20a,30%20minute%20walk%20every%20day%E2%80%9D>

Here is a list of some Canadian adaptive community programs and resources: <https://sciguideines.ubc.ca/resources/>



4. Week 8 - Top Takeaways

Congratulations! You have officially completed the entire 8-week SCI Step Together program. How do you feel right now? How have you found this process? Some takeaway questions we have for you are:

- My most meaningful realization from this process has been...
- The challenge that has brought me the greatest learning opportunity...

As you know, this is the final week of the SCI Step Together program. We invite you to continue to engage with your peers and with the program content at your leisure. We want to sincerely thank you for participating in this program with us! We are so glad you could join us and we are grateful we had you as a participant. As always, we are sending you our best wishes and warmest regards. Keep up the amazing work and remember, we truly are Stronger Together!

