Material Handling
Participant

Workbook to accompany inhouse training.

Created by NBCCSA – November 2022

Welcome

The NBCCSA would like to thank all those that helped bring this program to light. Hours of research from within Canada and around the world was used to find best practices as of 2020.

It is designed specifically for New Brunswick nursing homes; a new comprehensive musculoskeletal injury prevention program (MIPP) that would:

- Include theory, practice, assessments, audit, enforcement, sustainability
- Help develop an internal training team
- Include Policies and Procedures

Resources for the information include: Electrolab Limited (SafeStart), Fraser Health (Provincial Safe Resident Handling Standards), SASWH (*TLR* program), Accident Compensation Corporation (*The New Zealand Patient Handling Guidelines),* WorkSafeAB (*No Unsafe Lift*) and WorkSafeNB (BIF).

NBCCSA has a responsibility to its membership (approximately 70 Nursing Homes) to deliver safety education and training to meet their safety needs. The NBCCSA Incident Management System has been collecting incident data for the past several years and can identify trends in incident type, frequency, and severity. Musculoskeletal injuries have been identified as the most significant injury type.

Thank you to: York Care Centre staff & management for the use of the facility as well as expert insight. Thank you to Leah Thomas-Olson MSc. of Fraser Health, Sandra Cripps, Saskatchewan Association for Safe Workplaces in Health (SASWH), and the six pilot sites: Westford Nursing Home, Villa Providence Shediac, Rexton Lions Nursing Home, Salvation Army Lakeview Manor, White Rapids Manor and York Care Centre.

Program Developers

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New Brunswick Continuing Care Safety Association Inc.

Association de sécurité des soins continus du Nouveau-Brunswick Inc.

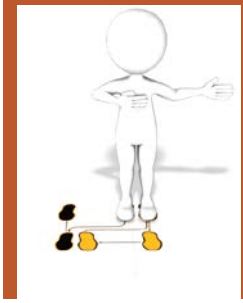
Who we are

The New Brunswick Continuing Care Safety Association (NBCCSA) is a not-for-profit association created in 2013 with the intent to not only service the unique needs of the nursing home sector, but to promote health and safety for the homecare, special care homes and acute care streams.

Often those who take care of our most vulnerable put their safety at risk when providing quality care by putting their residents' and clients' needs ahead of their own safety.

The NBCCSA is dedicated to providing cost-effective, custom built programs, solutions and tools to meet the needs of the sectors it serves while maintaining the high standards of care provided by its members.

For additional support, please contact: info@nbccsa.com or 506-454-3136



LINKING EMPLOYEE AND RESIDENT SAFETY TO QUALITY CARE

Without employee safety in mind, nursing homes can never reach the highest quality of care for residents. There is no such thing as quality care if you are willing to take chances and shortcuts!

NOTES:

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Exercise 1- Personal reasons

Write down the things you love to do, that you might have to give up if you were seriously hurt

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Risky Behaviour

NOTES:

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Exercise 2 – Measuring risks

Safety is a function of risk. Any activity involves a certain risk, the probability of being injured more or less seriously, whether it is walking or handling chemicals, driving a car, working with electronic tools, welding, climb a ladder, ride a motorcycle or jump from a plane.

1. Which of these vehicles offers the best protections?
    a. A car
    b. A motorcycle

2. Which of these vehicles offers the best protection?
    a. Minivan with integrated airbags
    b. 1965 Corvette with fiberglass body

3. Which activity presents the greatest amount of energy (the greatest risk)?
    a. Walking
    b. Running

4. Fatal crashes in Formula 1 races have become less frequent than before. What is that due to?
    a. Improving protection measures
    b. The reduction of dangerous energy (cars go slower than before)

Until now, it has been fairly easy to determine the risk based on the degree of protection and the amount of hazardous energy. Unfortunately, it is much more difficult to calculate the risk of inattention.

5. Which of these behaviours is the riskiest?
    a. Drive at 130 km/h with great concentration
    b. Drive at 90 km/h while thinking of something else
    c. Difficult to say: both behaviours are risky

6. Which of these activities carries the highest risk?
    a. Running
    b. Walking without looking where we are going

7. Which of these industries has the highest amount of hazardous energy?
    a. Healthcare
    b. Petroleum

8. In which of these areas has the greatest number of injuries per person?
    a. Healthcare
    b. Petroleum

9. It is difficult to assess the likelihood that a person is paying attention or not to what they are doing. On the other hand, we know that the risk of inattention is:
    a. Higher when performing a task for the first time
    b. Higher when performing a task for the hundredth time

10. We also know that the risk of inattention is higher when
    a. Rushing
    b. Tired
    c. Frustrated

You can't leave an injury in your work locker. It can be something that stays with you the rest of your life.

CASE STUDIES

"I WAS TRANSFERRING THE RESIDENT FROM THE TOILET TO HER WHEELCHAIR AND AFTER LIFTING HER AND BEARING HER WEIGHT, SHE SAID SHE WAS UNABLE TO MOVE HER RIGHT LEG AND ASKED ME TO MOVE IT FOR HER. WHILE BEARING HER WEIGHT, IN THE BATHROOM, THERE WASN'T ENOUGH ROOM TO BEND OVER SO I HAD TO SQUAT WHILE ENSURING RESIDENT SAFETY AND USE ONE HAND TO HOLD UP THE RESIDENT AND THE OTHER HAND TO REACH DOWN AND MOVE HER RIGHT LEG FORWARD. "

Condition	*Error*
◯ Rushing	◯ Not observing ahead
◯ Aggavation	◯ Preoccupied
◯ Fatigue	◯ Exposed/unguarded
◯ Overconfidence	◯ Loss of grasp / contact

It is up to you to remember a shortcut can lead to a permanent injury. Are you willing to take that chance?

"EMPTYING THE LAUNDRY BAG INTO THE SORTING BINS. REMOVED HALF OF THE CLOTHING OUT OF THE BAG INTO THE TRANSPORT WAGON. LIFT THE LAUNDRY BAG, TURNED UPSIDE DOWN INTO SORTING BIN. LAUNDRY DID NOT COME OUT OF BAG AS BAG WAS OVERPACKED."

Condition	*Error*
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◯ Aggavation	◯ Preoccupied
◯ Fatigue	◯ Exposed/unguarded
◯ Overconfidence	◯ Loss of grasp / contact

Techniques to reduce Mistakes

Mindful	Think	Watch	Modify
Be mindful as to what condition you may be in and change your approach accordingly to prevent a critical mistake.	Think of how many near misses you've been through to avoid a serious injury.	Pay attention to risky behaviours from your colleagues and how that increases the chances of being hurt.	Modify your habits to reduce your risks

Realizing that you are in a state of making critical mistakes is a very important aspect of injury prevention. Once the critical mistake has been made, the severity of your injuries, depends only on your luck or the amount of dangerous energy involved.

Exercise 3 – Reacting to conditions

1. When you know you are late and it is almost certain that you will not arrive on time, the first thing to do is to:
    a. Call to inform you will be late and to come up with a solution
    b. drive as fast as possible to avoid having to warn anyone

2. Usually when people are aggravated, they:
    a. Forget to look for the line of fire
    b. Take several deep breaths to calm themselves down
    c. Rush

3. Being overconfident is the easiest state/condition to react to:
    a. True
    b. False

4. The minute you realize you are rushing, tired or frustrated you should:
    a. Try to slow down or calm down (if possible)
    b. Fix your eyes to the task you are doing
    c. Concentrate on what you are doing
    d. Look for anything that would cause you to lose your balance, adherence or grip and keep that in mind

RESPONSIBILITY / DUE DILLIGENCE

Employee Rights

RIGHT TO KNOW: the risks / hazards / dangers of the job
RIGHT TO PARTICIPATE: in health & safety program
***RIGHT TO REFUSE:** any task / job they feel is unsafe

*You must follow the steps laid out by WorkSafeNB

1. Stop the task (make sure you are not leaving another individual in danger) and report the situation to your supervisor. The supervisor will investigate to determine if the task is unsafe. If unsafe, you and the supervisor will work together to address the safety concern and you will resume work. If you feel the safety issue has not been addressed, then you take the second step.
2. You bring the concern to a member of the Joint Health and Safety Committee (JHSC). The JHSC will investigate to determine whether the task is safe. If not safe, they will work with you and the supervisor to come up with a solution to address the issue. If you feel it is still unsafe, you move to the third step.

3. If the JHSC have deemed the task as safe, and you still feel the task is unsafe, you ask that an Officer of WorkSafeNB be contacted to determine whether the task is safe. Their findings will be final; either safe and continue the work or unsafe and the employer must fix the situation.

Note: In healthcare, there are tasks that are deemed risky, you cannot refuse those duties that may be the difference between life and death for the residents.

Employee Responsibilities

FOLLOW: employer's policies
BE ACCOUNTABLE for the way you work
Take **TRAINING** and **USE** the skills taught
Use equipment safely
REPORT anything that is unsafe

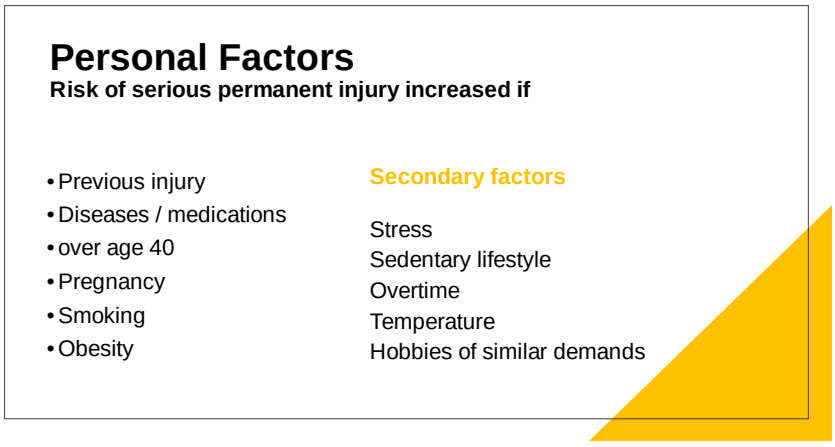
You are responsible for your own actions. You have the right to report, but you also have a responsibility to report!

Due Diligence

Every employee has a legal responsibility to act with reasonable care, or due diligence, when performing their job.

Must take **ALL REASONABLE PRECAUTIONS TO PROTECT YOURSELF AND YOUR CO-WORKERS**, work safely and comply with health and safety policies, procedures, and regulations.

Saying "I did not know" does not work when proving due diligence, rather ask "did I seek out the knowledge?"

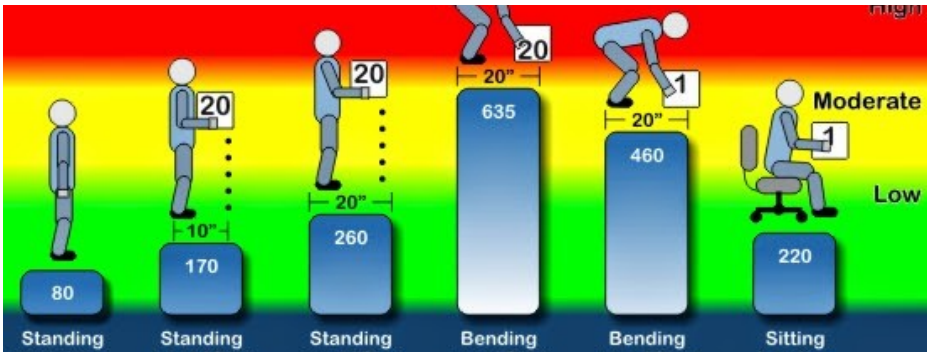


Exercise 4 – Tasks in awkward positions

What tasks do I do during the day, at work or at home that can put me in an awkward position?

Task?	Ways to avoid it?
_____	_____
_____	_____
_____	_____
_____	_____

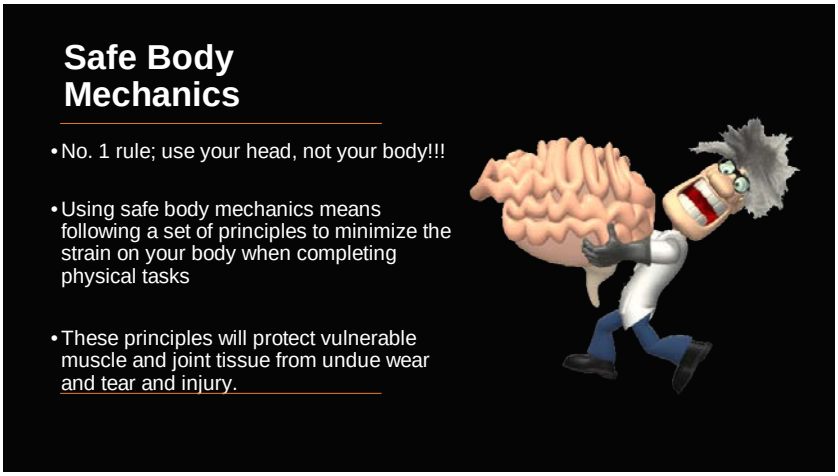
Forces Applied
(think seesaw)



Forces applied during lifting

Think about the various tasks you perform each day. Remind yourself to consider these forces when you are lifting something. Also consider how many times you lift during the day. The weight can get quite considerable.

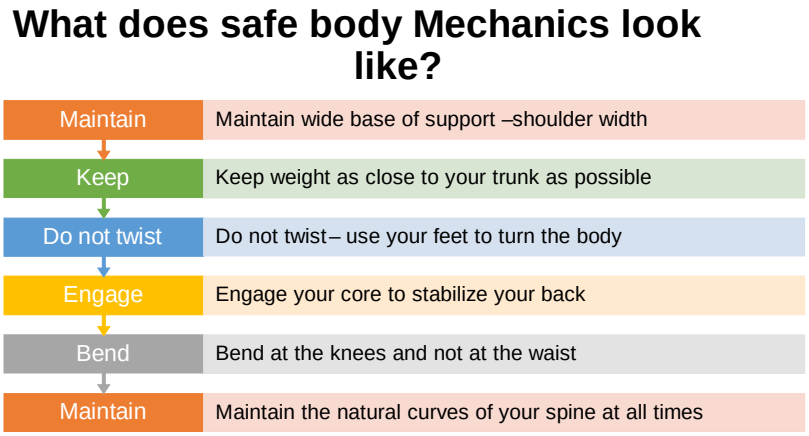
SAFE BODY MECHANICS



REMEMBER

- Use your head and not your body!
- Use the technique that requires the least physical effort
- Use large muscle groups and joints
- Avoid overextension, even for “light” objects
- Bacon is like the sinewy muscles on your back
- **Failure to plan is planning for failure!**

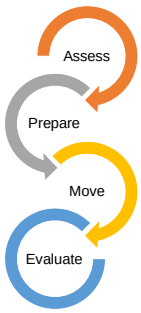
What does safe body mechanics look like?



REMEMBER

- Ears over your shoulders
- Shoulders over hips
- Arms braces at your side
- Feet shoulder apart
- Flex slightly at the knees

How to do it



Step 1. Assess

- Self-assess – do you already have an injury? Are you in a hurry? – slow down. You overconfident? - use your eyes before your body. You distracted/aggravated? Be Mindful!
- Know the object, how heavy, is it easy or hard to grasp, can the weight shift, is it better one or two people and what distance should it be moved before mechanical assistance?
- Know in advance where you are going to set the load down, and whether stairs or ramps are involved. (eyes before body)
- Make sure the entire path is free of obstructions or slipping hazards. (eyes before body)
- Watch out for nails, splinters, or anything else that could cause injury. (eyes before body)

- Think your way through the entire procedure. – Don't be overconfident! Use your eyes before moving your body! Don't be distracted! And if you are tired or nursing a previous injury…get help!

Step 2. Prepare

- Wear appropriate protective gear—gloves that will provide a safe grip, and safety shoes (anti slip in wet areas or protective reinforced footwear in case of a dropped load).
- Have all the tools and equipment you need close by.
- Make sure your colleague is ready and capable (if needed)
- Prepare for what could go wrong
- Clear the path

Step 3. Move

Lift:

- Face the load with feet about shoulder-width apart, one slightly ahead of the other.
- Bend at the knees and keep the back straight (not vertical, but in a forward lean), with chin tucked in so that the neck and head follow the same straight line. Lock the block!
- Grasp the load and draw it close to the body, with arms and elbows tucked to the sides.
- Lift gradually and smoothly, using the leg muscles, not the back muscles, to power the lift.

Transport:

- Move steadily and slowly, keeping the load close to the body and balanced.
- Move feet to move the entire body when changing direction, as turning only the upper body causes severe strain. No twisting!
- When walking through doorways or between machines, adjust the grip or turn the load slightly so that fingers won't be trapped between it and the other surface. Use your eyes before your body. Be mindful

Place:

- To lower the load, reverse the lifting steps: bending the knees, keeping the back line straight and the feet in the proper position.
- If the load must be placed at shoulder height or above, plan to rest it at about waist height and change the grip before completing the lift. – Take note to ensure you've identified the hazard of having to put heavy items above your shoulders – this should be changed and not remain the norm.
- To make sure that fingers are not pinched by the load when setting it down, let one edge or corner rest on floor or table and then slide hands up the side of the object before pushing the item into place.

Step 4. Evaluate

- Did the move go according to plan?
- Was there any discomfort or awkward positions? Items in the way?
- Did you feel safe and secure? Did your partner (if applicable)
- Correct any observed poor technique or communication between yourself and co-worker

Other Considerations

Besides knowing the proper techniques of lifting, moving, and placing a load, it is important to fairly assess both the scope of the job and one's own strength. Ask for help if the load is too heavy or awkward (too bulky or too long) to manage safely alone.

When performing a team lift, one person gives the orders to lift, turn, and set down. All members of the team perform these tasks in unison. They should move slowly and steadily, keeping the load level and weight evenly distributed, without changing their grips while carrying.

GENERAL RULES FOR SAFELY MOVING MATERIALS

PUSHING IS MORE EFFICIENT AND SAFER THAN PULLING

PUSHING RULES

- Grip at elbow height, keep arms close to the body
- Use your legs and body weight to move smoothly
- Reduce effort and stop carefully and slow down gradually
- Do not twist at the hips, no sudden jerks

PULLING RULES

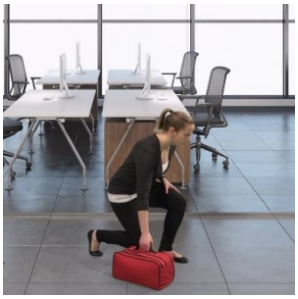
- Concentrate on keeping your core muscles tight to decrease pressure on your back
- Face the load squarely
- Once you start, take small backward steps
- Do not twist at the hips, no sudden jerks

General Rules for all lifting

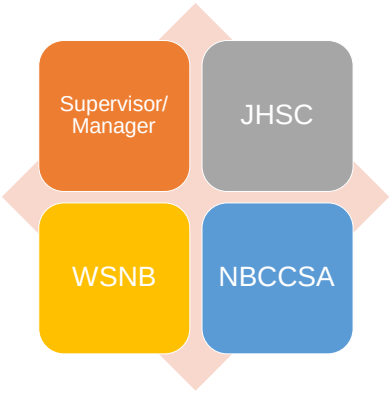
- Position body as close to the object as you can
- Keep arms as close to the body (don't be a seesaw)
- Use the power of your legs and centre of body
- Don't bend at the waist
- Avoid lifting from the floor
- Raise or lower the work surface to suit the height of the worker
- Pad the shoulders to provide a cushion
- Wear gloves that are proper size for the individual and that have a surface that will increase grip stability.
- Inspect and plan your route for any possible changes to resistance, such as carpet, objects in the way, resident feet, or uneven surfaces. **(eyes before body!)**

HANDS-ON PRACTICE

GENERAL MOVING TECHNIQUES

	**Golfer's Tip** Use your free hand to hold on to a structure for upper body support during a lift Firm up your core Slightly bend your knee of your supporting leg and raise your other leg straight out behind you as you lean forward to pick-up the object bending at the hip. Grasp the object firmly, push down on the fixed surface as you lower your back leg and return your upper body to an upright position.
	**One Handed Partial Squat Lift** Stand with the object close to your side Firm up your core Push your buttocks out and squat back and grasp the object Extend your legs to stand Hold your free arm away from your body to counterbalance the weight Take small walking steps and maintain a straight back.
	**One Handed Partial Lunge** Stand with the object close to your side Place your feet shoulder width apart one leg slightly ahead of the other Place one hand on a fixed surface or your thigh for support Firm up your core Push your buttocks out and squat back and slowly lower yourself to the object handle. Grasp the object & look forward, head aligned with your back. For support, as you lift, push down on the surface or thigh Lift upwards by extending your legs to stand gently pushing your hips forward
	**Power/Squat Lift** Face the object Form a wide stance positioning the object between your knees Firm up your core Push your buttocks out and squat back and bend your hips and knees to lower yourself down to the object. With your elbows close to your body and your arms between your knees Grasp the object & look forward, head aligned with your back. Rise up by pulling the hips forward and straightening the legs to lift.
	**Tripod/Lunge Lift** Place one foot to the side of the object Firm up your core Push your buttocks out and squat back and slowly lower yourself down to one knee. Position the object close to the knee on the ground Grasp the object firmly with both hands. Pull the object to mid thigh and then lift it up to the opposite thigh. If possible, put both forearms under the object with your palms facing upwards and hug the object into your stomach and chest. Prepare for the lift Look forward, head aligned with your back Lift upward by extending your legs and making sure to maintain a neutral spine.

Where do I get more information?



Supervisor / Manager

How to contact:

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Joint Health and Safety Committee Member

How to contact:

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WorkSafeNB

How to contact:

Visit their website at: www.worksafenb.ca

New Brunswick Continuing Care Safety Association

How to contact:

Visit their website at: www.nbccsa.com

Remember, you are responsible to get answers. "I don't know" does not work in the eyes of the law. Rather ask, "where can I get the information" and you will always meet your due diligence!

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