Fueling to Thrive During Basic Military Training

Canadian Armed Forces

Stay Fueled. Stay Strong. Stay Resilient, Relevant and Ready!

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Introduction

Welcome to the start of your military journey!

What is Basic Military Training?

Basic Military Training (BMT) is a program aimed at preparing new Canadian Armed Forces (CAF) recruits for military service. Throughout BMT, recruits are immersed in military life and equipped with the essential skills for their roles, combining classroom learning with physical training in both garrison and field settings.

What is This Guide?

This guide is designed to help you prepare for the dining experience during BMT by covering:

- Why Nutrition is Important
- Foundation of Healthy Eating
- Dining Hall Experience
- Fueling to Thrive at BMT

Why is Nutrition Important?

The demands of BMT are unique requiring strength and endurance - both physical and mental - to succeed. One factor that can enhance your mental and physical performance and contribute to mission success is good nutrition.

Proper nutrition is the foundation to successful military training. It ensures that recruits have the energy, strength, mental clarity and resilience needed to meet the physical demands of training, recover quickly, minimize the risk of illness and injury and maintain a focused mindset.

During BMT, nutrition is important because....

Health

Diet is the #1 risk factor for chronic disease. Eating a diet filled with nutrient-rich foods reduces the risk of career altering conditions like heart disease, type 2 diabetes, and some types of cancer.

Energy Supply

The long working hours and intense physical and mental demands during BMT require a constant supply of energy. This can be achieved by consuming 3 meals and 1-2 snacks throughout the day and ensuring a balanced diet rich in carbohydrates, proteins, fats, vitamins and minerals.

Cognitive Function

Good nutrition supports mental resilience by regulating mood and reducing the risk of anxiety and depression, helping recruits manage the psychological challenges of BMT. Brain-boosting nutrients, like omega-3 fatty acids and antioxidants can enhance memory, concentration and decision-making skills. This is important as recruits learn new information, follow complex instructions and remain alert in high-stress situations.

Injury Prevention

During BMT, recruits have a higher risk of injury, which can delay or prevent course completion. Ensuring adequate intake of key nutrients, like calcium and vitamin D, can reduce the risk of bone fractures or stress injuries. Calcium supports bone density and strength, while vitamin D enhances calcium absorption and plays a role in bone growth and repair.

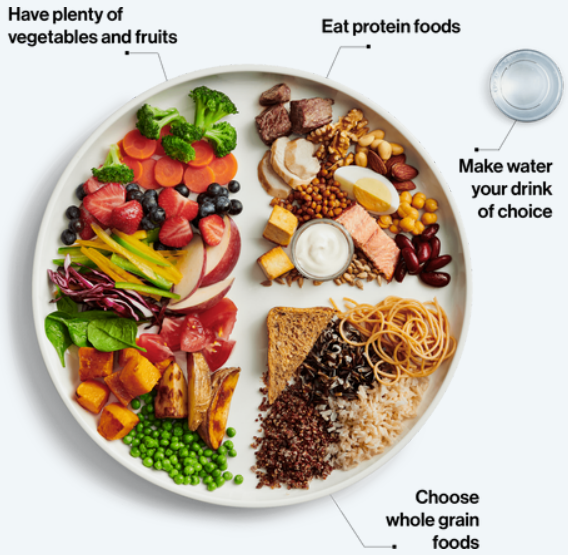
Foundation of Healthy Eating

Getting the right nutrients from food can feel overwhelming, but the plate below is a helpful guide.

It shows the proper food proportions to create a healthy, balanced meal, ensuring your body gets the macronutrients (carbohydrates, fats, protein) and micronutrients (vitamins, minerals) it needs.

The amounts shown represent the portion sizes for one meal while *preparing* for BMT.

During BMT, recruits need larger portions - read on to learn about proper nutrition during BMT.



1 Fruits and Vegetables

Aim to fill half your plate with fruits & vegetables. Vegetables & fruits should always make up the largest proportion of the foods you eat throughout the day. They provide important nutrients such as fiber, vitamins and minerals.

Learn More About Vitamins & Minerals...

2 Protein Foods

Aim to fill one-quarter of your plate with protein. Choose plant-based proteins like beans, lentils, and chickpeas for a healthier option that's higher in fiber and lower in saturated fat. The dining hall offers a plant-based option at each meal!

3 Whole Grain Foods

Aim to fill one-quarter of your plate with whole grains. Whole grains are healthier choices then refined grains because they include ALL parts of the grain. Whole grains have important nutrients such as fiber and carbohydrates.

4 Make Water Your Drink of Choice

Learn More About Hydration...

For beverages, choose water more often to promote hydration without adding calories. Many other drinks, such as soft drinks, flavored waters, energy drinks and hot chocolate contain calories, sodium, sugars and saturated fat, which can harm your health and performance.

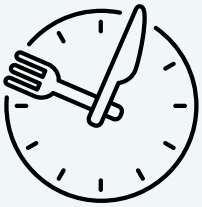
Dining Hall Experience

Watch a Video of the Dining Hall

Knowledge of how the dining hall operates can help you navigate mealtimes efficiently, make informed food choices, and appreciate the efforts behind the seamless service of meals.

Meal Timing

The dining hall schedules mealtimes for each platoon to avoid crowding, reduce wait times and make sure everyone has enough time to eat.



Be Aware: mealtimes during BMT can be short and unpredictable, making eating feel rushed and stressful. This can lead you to choose calorie-dense foods (a lot of calories in small amounts of food), like desserts and fried foods, over nutritious options like fruits and vegetables. To FUEL YOUR BODY PROPERLY, focus on eating a VARIETY of BALANCED foods, even with limited time.

Meal Structure

The dining hall is designed to serve meals efficiently. Before entering, a menu board displays all the food options to help recruits plan their meals. Inside, recruits take a compartmentalized tray with sections designated to create balanced meals and then proceed to the serving area, which is divided into different stations, as explained below.

BREAKFAST

Stations	Description
Hot Meal Line	offers entrées (eggs, baked beans), breakfast meats (bacon, sausage, ham) and a starch (pancakes, potatoes)
Cold Food Station	features fresh fruit, yogurt, cheese and a vegetable
Cereal Station	includes a variety of cold cereals as well as a hot cereal, like oatmeal or cream of wheat
Bread Station	provides a variety of bread and baked products, including whole grain options
Beverages & Condiments	offerings include hot beverages (coffee, tea, hot chocolate), fruit and vegetable juices, milk, water and milk alternatives.

LUNCH AND SUPPER

Stations	Description
Soup Station	offers a selection of soups with crackers, including one vegan option
Hot Meal Line	offers entrées (healthier choice meat and vegetarian/vegan option), a local entrée, cooked starches and vegetables
Sandwich Bar	offers a variety of individual components to create a customizable sandwich
Salad Bar	features pre-made salads, build-your-own options, plant-based proteins and nutritional yeast.
Bread Station	provides a variety of bread and baked products, including whole grain options
Dessert Station	includes a range of baked desserts as well as healthier choice options like fruit and yogurt.
Beverages & Condiments	offerings include hot beverages (coffee, tea, hot chocolate), fruit and vegetable juices, milk, water and milk alternatives.

Fueling to Thrive During BMT

Recruits in BMT have unique nutritional needs to support the physical and mental demands of training. Proper nutrition is essential for maintaining energy, promoting recovery and ensuring overall performance.

Calories

Learn More About Calories...

Recruits in BMT need MORE calories than the average person!

On average, recruits require about **4,300 calories per day**, though this will vary depending on the activities of the day. The highest energy demand is in Week 8, and the lowest is in Week 2.

Listen to your body's hunger and fullness signals and adjust your eating as needed.

Macronutrients

Macronutrients - carbohydrates, fats and protein - are the parts of food that give the body energy in the form of calories. It is important to focus on the right balance of macronutrients, to provide the energy and micronutrients your body requires.

Carbs

The Body's Primary Source of Energy

Why Carbs Matter for Recruits:

- Energy Supply
- Endurance and Stamina
- Muscle Recovery
- Mental Performance
- Source of Micronutrients

Carb Sources in the Dining Hall:

- Fruits
- Vegetables
- Whole Grains
- Legumes
- Dairy Products
- Nuts and Seeds

Learn More About Carbohydrates...

Protein

For Muscle Repair and Growth

Why Protein Matters for Recruits:

- Muscle Repair and Growth
- Immune Function
- Energy
- Satiety
- Hormone and Enzyme Production

Protein Sources in the Dining Hall:

- Animal-Based:
  - meat (chicken, turkey, beef, pork), fish and seafood, dairy products and eggs
- Plant-Based:
  - legumes, nuts and seeds, soy products, whole grains

Learn More About Protein...

Fats

For Cognitive Performance and Recovery

Why Fat Matters for Recruits:

- Energy Source
- Nutrient Absorption
- Hormone Production
- Brain Health
- Reduction of Inflammation
- Temperature Regulation
- Organ Protection

Fat Sources in the Dining Hall:

- Fish
- Nuts and Seeds
- Oils/Salad Dressings
- Dairy Products
- Avocados
- Eggs

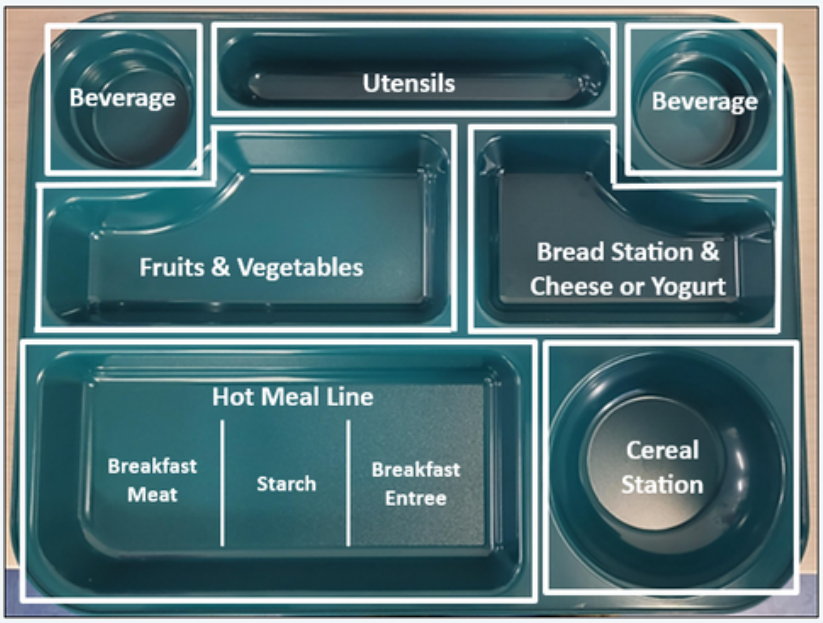
Learn More About Fat...

Fueling to Thrive During BMT

This section will guide you on how to use the meal tray to build well-balanced meals that meet recruits' calorie and macronutrient needs. supporting health and performance throughout BMT.

By assigning each section to a food station, as explained on the 'Dining Hall Experience' page, recruits can easily plan their meals to meet their nutritional needs.

BREAKFAST



Middle Compartments

Cold Food Station

Use the two middle compartments for items from the cold food station. Include a vegetable, a fruit and a dairy product like cheese or yogurt. This section is rich in calcium, vitamin D, fiber and essential vitamins and minerals.

Bread Station

Add carbohydrates to your meal, which are vital for energy. Add a bread item like whole grain toast or an English muffin.

Bottom Compartments

Hot Meal Line

Fill the largest compartment with the selections from the hot meal line, focusing on a breakfast entrée, breakfast meats and a starch. This section is your primary source of protein mixed with a small amount of carbohydrates.

Cereal Station

Use the bowl to add carbohydrates to your meal, which are vital for energy. Add a whole grain cereal, either hot or cold.

Top Compartments

Beverages

Choose a hydrating drink like water, milk, milk alternative or a small coffee to support energy, concentration and fluid balance.

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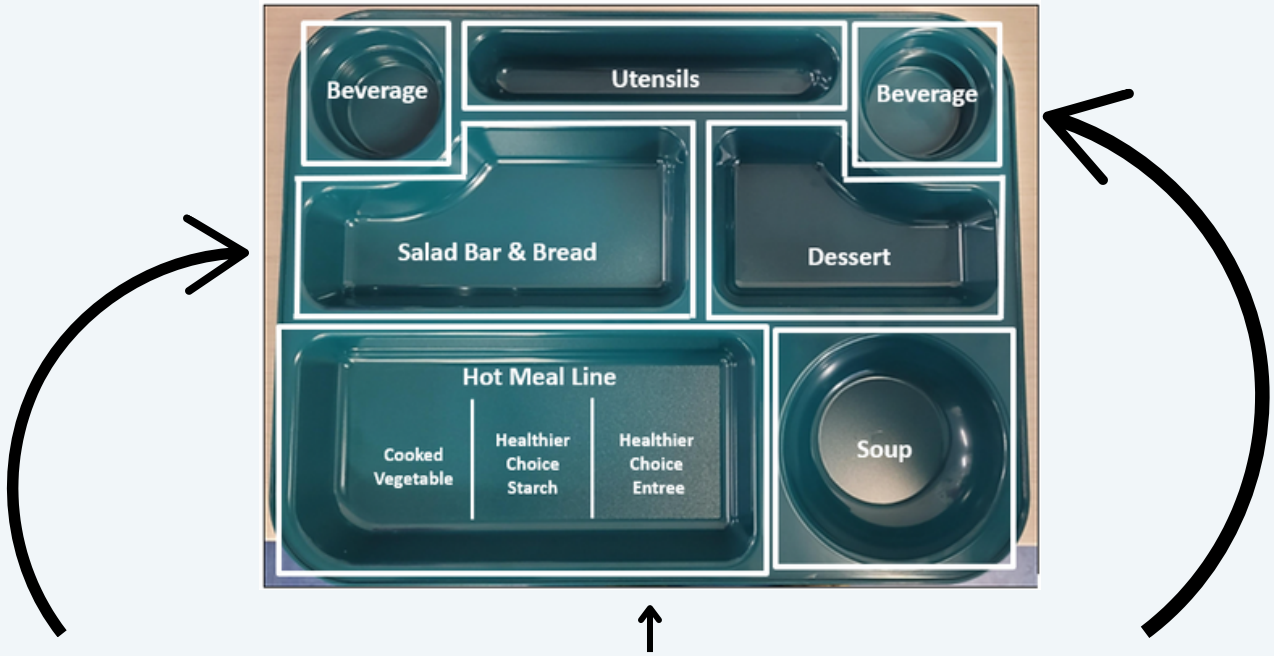
LUNCH AND SUPPER



Middle Compartments

Salad Bar

Add fresh items from the salad bar, whether it's a pre-made salad or a mix of ingredients to create your own. Aim to include a variety of colors to ensure a broad range of nutrients.

Bread Station

Add carbohydrates to your meal, such as a whole grain roll or slice of bread, which are vital for energy.

Dessert

Use the small compartment to enjoy a balanced portion of dessert. Opt for a healthier option such as yogurt or fruit, contributing vitamins, fiber and/or natural sweetness to your meal.

Bottom Compartments

Hot Meal Line

Fill the largest compartment with the selections from the hot meal line, focusing on the healthier choice entrée (meat or vegetarian/vegan), a cooked vegetable and the healthier choice starch option to provide energy, protein, fiber and nutrients for recovery and focus.

Soup Station

Use the bowl-shaped compartment to add a broth-based or vegetable-rich soup to your meal for extra nutrients and hydration.

Top Compartments

Beverages

Choose a hydrating drink like water, milk, milk alternative or a small coffee to support energy, concentration and fluid balance.

Fueling to Thrive During BMT

Here is an example of a well-balanced meal tray that meets recruits' calorie and macronutrient needs. supporting health and performance throughout BMT.

BREAKFAST

LUNCH AND SUPPER

Fueling to Thrive During BMT

If you follow the meal tray guides for breakfast, lunch and supper, you will consume about 3,600 calories per day.

However, recruits need an average of 4,300 calories per day, resulting in a

700 calorie deficit.

To meet energy needs, recruits should eat additional snacks throughout the day.

Ideally, snacks should include both a carbohydrate and a protein to provide energy and support recovery.

Eating snacks between meals helps close the 700-calorie gap between your energy needs and the calories provided by the meal trays.

Where to get snacks:

1. The Kitchen: you may take one portable items from the kitchen after meals (i.e., a piece of fresh fruit).

2. Vending Machines: you will have access to vending machines available throughout the CFLRS facility.

3. Nighttime Snack: nutritious, shelf-stable snacks are provided in the common lounges at the end of the day.

Food-Related Accommodations

1. Plant-Based Diets (Vegetarian and Vegan)

The CAF Menu, available at all CAF dining facilities, offers plant-based options at every meal, including lacto-ovo vegetarian OR vegan entrées and sides. If you follow a vegan diet, let the local kitchen staff know to ensure your needs are met.

2. Religious-Based Dietary Requirements

For recruits who practice a religion that involves specific dietary practices, accommodations may be necessary. Guidelines for these accommodations are outlined in the Defence Administrative Orders and Directives (DAOD) 5516-3. To request a religious-based dietary accommodation, recruits must complete a 'Request for Accommodation' (form DND 2983). Once submitted, CAF Food Services will work with the recruit to find mutually agreeable solutions that respects their religious dietary needs.

3. Allergies and Intolerances

Due to various constraints, CAF Food Services is NOT ABLE to SAFELY accommodate specific dietary needs, such as food allergies, intolerances, gluten-free diets, medical conditions or individual nutritional requirements that need therapeutic intervention.

If you have medical concerns regarding your nutritional needs, it is recommended that you seek support from Canadian Forces Health Services.

In the dining hall, look for these symbols to identify menu items that may meet your needs:

Vegetarian: identifies lacto-ovo vegetarian items, which may contain milk, cheese and/or eggs.

Vegan: identifies vegan items, containing no animal products.

Halal Friendly: identifies items, made using halal-certified meats and avoiding haram foods. While not certified halal, it aligns with halal guidelines to the extent possible within CAF facilities.

Contains Pork: identifies items that contain pork or pork-by-products.

Structure of CAF Food Services

CAF Food Services (FS) refers to the organization of personnel in units and other locations. CAF FS provide food services in all garrison, base and operational settings, in and outside Canada, using CAF members, DND employees and contracted personnel.

For recruits, it is important to know that CAF Food Services is structured into two entities: Strat J4 Food Services and the CFLRS Dining Facility.

Strat J4 Food Services

The Canadian Joint Forces Command (CJFC) oversees CAF FS, with authority to make decisions, and create or update policies to meet CAF needs.

Strat J4 FS is a team of military and civilian personnel under SJS in the National Capital Region, led by the LCol and Chief. The responsibilities of Strat J4 FS include:

1. Set the policies and guidelines for all CAF dining facilities, and,
2. Develop the CAF Menu, including the 'healthier choice' items.

Regarding nutrition, Strat J4 FS ensures that FS policies:

- align with Canada's Food Guide
- meet CAF nutrition needs
- provide equitable accommodations for religious dietary requirements

CFLRS Dining Facility

The CFLRS Dining Facility, known as 'The Mega', is where recruits gather to enjoy nutritious meals and connect with peers.

Trained military cooks and support staff manage daily operations, ensuring meals are prepared and served efficiently. They use 'healthier choice' recipes provided by Strat J4 FS, alongside local meal options tailored to regional preferences. Strict food safety and hygiene standards are followed to meet the high expectations of the CAF.

The dining facility follows CAF Food Services Standards set by Strat J4 FS, outline in Chapter 3 of the Food Services Manual (available on DWAN). These standards ensure a variety of meal options to meet the nutritional needs of all military personnel, including recruits.

Case Scenario #1

Q

You are a recruit in the CAF, and you have a demanding day of physical training (PT) ahead. Should you eat breakfast before your demanding day? If so, what types of food should you eat?

A

Yes, eat breakfast before your demanding day to fuel your body, sustain energy, and support performance. A balanced meal with carbohydrates, protein and healthy fats helps maintain focus and muscle function throughout the day - here is a suggested plan to set you up for success...

Hot Meal Line (Centre): scrambled eggs for protein and baked potatoes for carbohydrates. Avoid high-fat foods like sausages or bacon to prevent discomfort during exercise.
Cold Food Station (Left): bananas for potassium, Greek yogurt for protein and calcium and tomato slices for vitamins and minerals
Breads and Cereals (Right): oatmeal and whole grain toast for sustained energy. Add peanut butter for healthy fats.
Beverages (Top): water and milk for hydration

Q

In the same scenario, what should you eat if you are not hungry in the morning?

A

If you're not hungry in the morning, opt for easy-to-digest, nutrient-dense, carbohydrate-rich options like smoothies, cereal with milk, yogurt parfaits, or peanut butter toast with banana.

Q

What should you eat if PT is scheduled right after breakfast?

A

When PT follows breakfast, choose easily digestible foods by prioritizing carbs, moderate amounts of proteins and limiting fat. Examples include oatmeal with Greek yogurt and fruit or toast with sliced banana paired with a glass of milk.

Case Scenario #2

Recruits often have tight schedules to eat. In such situations, how can recruits make smart food choices to ensure they get enough energy and nutrients for health and performance?

With a tight timeline to eat, recruits should make quick, smart food choices, focusing on nutrient-dense, energy-packed options to sustain them and plan for ways to make up for any energy (or calorie) gaps later in the day. Here is how recruits can quickly fill the tray for a balanced meal.

1 Focus on the Centre Compartment

Start by filling the center component, which offers the most space and the greatest nutritional variety. Fill it with nutrient-dense options from the hot meal line, focusing on lean protein source (such as the 'healthier choice' entrée), a 'healthier choice starch (like mashed potatoes or quinoa, and a cooked vegetable. This combination offers protein for muscle repair, carbohydrates for energy and vitamins and minerals from the vegetables.

2 Choose the Next Station Based on Upcoming Activities

Recruits should prioritize their next choice based on the day's activities:
(1) High Intensity Activities: for afternoons with physical demands, prioritize the bread and soup station for hydration and carbohydrates. If time permits, choose a grain- or bean-based pre-made salad from the salad bar.
(2) Lower Intensity Activities: for less active afternoons, focus on the salad bar for added vitamins and minerals. Add a protein option like eggs or cottage cheese.

3 Finish with Beverages and a Dessert

For desserts, opt for a fruit-based dessert to add carbohydrates and vitamins/minerals. For beverages, choose a calorie-contributing drink like milk, plant-based alternatives or fruit juice for added nutrients.

Extra Material

Calories (Energy)

What is a Calorie?

A calorie is a unit of energy. It measures the amount of energy food provides. Consuming the right number of calories is crucial for maintaining energy balance, supporting bodily and brain functions, and fueling your training during BMT.

Why Calories are Important for Recruits

- Vital Functions: Calories fuel activities like hormone production, immunity, digestion and more.
- Energy Supply: Eating enough provides stamina for physical activities such as running, marching, and strength training.
- Cognitive Function: Calories supports brain function, helping with focus, concentration, decision-making and learning.
- Muscle Maintenance: Adequate caloric intake helps preserve muscle mass and supports muscle repair and growth.
- Health: Sufficient calories support overall health and well-bring, reducing the risk of fatigue, injury and illness.

Caloric Needs of Recruits

Caloric needs depend on age, sex, weight, height and activity level. For BMT recruits, energy demands are much higher due to the rigorous training and long days, averaging **4,300 calories daily**. However, this will vary depending on the type of activity, with the highest energy demands in Week 8 and the lowest in Week 2.

Recruits often struggle to meet these needs, consuming around 3,200 calories daily. Factors such as strict meal schedules, limited time and lack of nutrition education contribute to this deficit, which can affect energy, performance, health and injury risk. Understanding calorie needs and planning meals and snacks mindfully is essential to meet these demands and maintain performance.

Sources of Calories

Calories comes from the following macronutrients:

- Carbohydrates: provides quick energy.
- Protein: essential for muscle growth and recovery.
- Fats: for long-term energy, hormone production and nutrient absorption

Learn More About Carbohydrates...

Learn More About Protein...

Learn More About Fat...

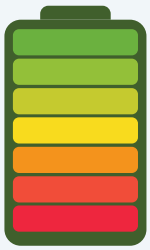
Tips for Meeting Your Caloric Needs

- Eat Balanced Meals and Snacks: Have three meals and snacks daily, containing carbs, protein and fat to maintain energy throughout the day. Avoid fad diets!
- Plan Meals: Review the CAF Menu options before the service line to understand what is offered to fill your tray.
- Listen to Your Body: Adjust your food intake based on your hunger and fullness cues, and activity levels of the day.
- Monitor Progress: Track your energy, hunger, performance and weight to identify is dietary adjustments are necessary.

Carbohydrates (Carbs)

What is a Carb?

Carbohydrates are the body's main energy source during moderate to intense exercise. They are stored as glycogen in the muscles and liver, ready to be used as fuel when needed. Since glycogen storage is limited, consuming carbohydrates throughout the day is crucial to replenish energy.



Carbohydrates are classified into three main types:

- Sugars (simple carbs): provide quick energy and are found in nutrient-rich foods like fruits and milk. Limit intake of less nutritious sources like candy, fruit drinks and syrups.
- Starches (complex carbs): offer long-lasting energy and are found in whole grains, potatoes and legumes.
- Fiber: does not provide energy but it supports digestion and helps you feel full. It is found in fruits, vegetables and whole grains.

Why Carbs are Important for Recruits

- Provide Energy: carbs, as glucose/glycogen, fuel muscles during intense activities like running and strength training
- Endurance and Stamina: Adequate carbs maintain energy levels, preventing fatigue during long training sessions.
- Recovery: ingesting carbs after activity, replenishes glycogen stores, supporting recovery and reducing the risk of injury.
- Brain Function: glucose supports focus, memory and decision-making.
- Source of Nutrients: many carb-rich foods contain vitamins, minerals and fiber, promoting health, performance, and immune function.

Sources of Carbs in the Dining Hall

- Fruits: apples, banans, berries, oranges, grapes, etc.
- Vegetables: carrots, sweet potatoes, corn and peas.
- Whole Grains: whole wheat bread, brown rice, oatmeal, quinoa, etc.
- Legumes: lentils, chickpeas, black beans, kidney beans, etc.
- Dairy Products: milk, cheese and yogurt
- Nuts and Seeds: almonds, pumpkin seeds, sunflower seeds, etc.

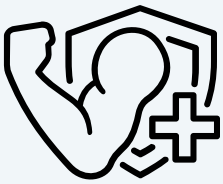
Tips for Healthy Carb Intake

- Choose Whole Grains: select whole grain bread, pasta and cereals over refined options.
- Add Variety: Include fruits, vegetables, legumes, whole grains and dairy for a wide range of nutrients.
- Choose Whole Fruits: opt for whole fruits over juices for more fiber and nutrients.
- Stay Hydrated: drink water to aid with digestion of high-fiber foods.
- Balance Meals: pair carbs with proteins and healthy fats for sustained energy and muscle support.

Protein

What is Protein?

Protein, made of amino acids, builds, maintains and repairs tissues, including muscles, skin and organs. It also supports enzyme and hormone structures, muscle contraction, injury recovery and immunity. There are 20 different amino acids, 9 of which are essential, meaning they must be obtained through the diet as the body cannot produce them.



Why Protein is Important for Recruits

- Muscle Repair and Growth: Protein rebuilds and strengthens muscle after BMT PT, helping gain strength and recover.
- Immunity: Protein supports antibody and immune cell production to fight infections.
- Satiety: Protein keeps you full longer, reducing hunger and overeating.
- Hormones and Enzymes: Protein aids in producing hormones and enzymes for metabolism and digestion.

Sources of Protein in the Dining Hall

Plant-Based Sources

- Legumes: lentils, chickpeas, and beans
- Nuts and Seeds: almonds, peanuts, chia and flax seeds
- Soy Products: tofu, tempeh, edamame and fortified soy milk
- Whole Grains: quinoa, bulgur, farro and whole wheat products

Animal-Based Sources

- Meat: chicken, turkey, beef and pork
- Fish and Seafood: salmon, tuna, cod and shrimp
- Dairy Products: milk, yogurt, cheese and cottage cheese
- Eggs: whole eggs and egg whites

Tips for Healthy Protein Intake

- Choose Lean Proteins: opt for lean means like skinless poultry and trim any extra fat.
- Include Plant-Based: Add plant proteins for more fiber and to decrease saturated fat intake.
- Balance Intake: Spread protein consumption evenly throughout the day to support recovery and satiety.
- Limit Processed Meats: Reduce the intake of items like sausage, bacon and deli meat as they contain high amounts of unhealthy fats and sodium.

Protein Food Chart		
Food Item	**Serving Size**	**Protein Content**
Beef, Lean, Ground	150 g	45g
Beef, Flank Steak	185 g	63g
Chicken, Breast	150 g	47g
Turkey, Breast	150 g	48g
Pork, Loin	150 g	49g
Egg	2 Large	12g
Salmon	125 g	28g
White Fish (Cod, Haddock)	125 g	24g
Tofu	125 g	10g
Yogurt, Greek	100 g	8g
Milk, 1%	250 ml	9g
Almonds	60 ml	7g
Black Beans	125 ml	8g
Chickpeas	125 ml	8g

Fat

What is Fat?

Fat, a key macronutrient, is essential for many bodily functions and serves as a major source of energy.

Fats are classified into three main types:

- Saturated Fats: found in animal products and solid at room temperature. Examples include coconut oil, cheese and butter.
- Unsaturated Fats: found in plant oils and liquid at room temperature. Examples include olive and canola oil. There are two types:
  - Monounsaturated: found in olive oil, avocados and certain nuts
  - Polyunsaturated: includes omega-3 and omega-6 fatty acids. Found in fatty fish, soybeans and walnuts.
- Trans Fats: found in processed and fried foods. They are harmful to your health and should be limited.

Why Fat is Important for Recruits

- Energy: Fats supply long-lasting energy for rest and low intensity activities.
- Nutrient Absorption: aid in absorbing fat-soluble vitamins (A, D, E, K).
- Cell Function: Essential for cell membrane structure and function.
- Hormones: crucial for hormone production regulating metabolism and immunity.
- Brain Health: omega-3's support brain function and cognitive performance.
- Inflammation: omega-3's reduce inflammation and aid recovery.
- Temperature Regulation: fat insulates the body and helps maintain internal temperatures.
- Organ Protection: Cushions organs, like the heart and kidneys, providing shock absorption and support.

Sources of Healthy Fats in the Dining Hall

- Fish: salmon, tuna and trout
- Nuts and Seeds: almonds, walnuts, pumpkin and sunflower seeds
- Oils: olive, avocado and canola oil
- Dairy Products: yogurt, cheese and milk
- Avocados
- Eggs (particularly the yolk)

Tips for Healthy Fat Intake

- Focus on Unsaturated Fats: include mono- and polyunsaturated fats like nuts, seeds and fatty fish for heart health and recovery.
- Limit Unhealthy Fats: reduce the intake of saturated fats and avoid trans fats as they hinder health and recovery.
- Choose the 'Healthier Choice' Option: they focus on healthy cooking techniques and lean meats.
- Watch Portions: Even healthy fats are high in calories, so be mindful of portions.

Hydration

What is Hydration?

Hydration involves consuming enough fluids to support vital functions like temperature regulation, joint lubrication and nutrient transport. Proper hydration is essential for health and peak performance, especially during intense military training.

Why Hydration is Important for Recruits

- Performance: proper hydration sustains strength, endurance and overall performance. Dehydration can lead to fatigue, cramping and decreased coordination.
- Temperature Regulation: water help regulate body temperature, especially important during strenuous activities or when in extreme weather conditions.
- Cognition: staying hydrated supports mental clarity, focus, and decision-making abilities.
- Recovery: hydration aids muscle repair by transporting nutrients and removing waste.
- Injury Prevention: water lubricates joints and muscles.
- Health: water supports digestion, circulation and cellular function.

Sources of Hydration in the Dining Hall

- Water: the primary source of hydration
- Electrolyte Drinks: can replenish electrolytes lost during intense activity
- Milk: hydrates while providing calcium and protein
- Fruit Juices: choose 100% juice for hydration and nutrients
- Fruits: water-rich options include watermelon and oranges
- Vegetables: hydrating choices include lettuce, celery and tomatoes
- Herbal Teas: Non-caffeinated teas support fluid intake
- Caffeinated Beverages: moderate coffee of tea intakes (2-3 cups of coffee or 5-8 cups of tea) contribute to hydration but avoid excessive caffeine to prevent dehydration and other side effects (anxiety, etc.)

Tips to Stay Hydrated

- Drink Regularly: don't wait until thirsty to drink, sip water throughout the day.
- Monitor Urine: a pale-yellow color indicates good hydration, dark yellow signals dehydration.
- Eat Hydrating Foods: include water-rich fruits and vegetables in your diet.
- Prioritize Water: limit sugary drinks, caffeine, energy drinks and alcohol.
- Adjust for Conditions: increase fluids in hot/humid or with heavy clothing as you will sweat more
- Carry a Water Bottle: Always keep your issued water bottles with you to remind yourself to drink.
- Hydrate Around Exercise: drink water before, during and after training, adding electrolytes if your training is over 60 mins.

Vitamins and Minerals

What are Vitamins and Minerals

Vitamins and minerals, or micronutrients, are essential nutrients our bodies can't produce, so they must come from our diet. While they do not provide energy, they support metabolic processes, health, growth and bodily functions. Dietary Reference Intake (DRIs), developed by Health Canada and the Institute of Medicine, guide nutrition standards in Canada, including the CAF Nutrient Standards and Menu. DRIs cover 35 micronutrients and are tailored to age, sex, and life stage.

Why Vitamins and Minerals are Important for Recruits

- Energy: B vitamins convert food into energy, boosting stamina and endurance.
- Immunity: vitamins A, C, D, E, zinc and selenium strengthen the immune system.
- Bone Health: calcium, vitamin D, magnesium and phosphorous support strong bones and reduce injury risk.
- Muscle Function: sodium, potassium, magnesium and calcium aid muscle contractions and prevent cramping.
- Oxygen Transport: iron supports hemoglobin production, delivering oxygen to muscles during activities
- Antioxidants: vitamins C, E, and selenium reduce oxidative stress and aid recovery.
- Tissue Repair: vitamin C supports collagen production for tissue maintenance and repair.
- Mental Focus: B vitamin, iron and magnesium enhance cogntivie function and decision-making.

Sources of Vitamins and Minerals in the Dining Hall

- Fruits & Vegetables: high in vitamins A, C, K, folate, potassium and magnesium (e.g., kale, berries, oranges, spinach, carrots)
- Whole Grains: provide B vitamins, iron, magnesium and selenium (e.g., brown rice, oats, quinoa)
- Lean Protein: rich in b vitamins, iron, zinc, and selenium (e.g., chicken, fish, turkey, eggs)
- Dairy: source of calcium, vitamin D and phosphorous (e.g., milk, yogurt, cheese)
- Nuts & Seeds: contain vitamin E, magnesium, zinc, and selenium (e.g., almonds, sunflower seed)
- Legumes: offer iron, magnesium, potassium and folate (e.g., lentils, chickpeas)
- Fish: high in vitamin D, omega-3, and selenium (e.g., salmon, tuna)

Tips for Meeting Your Vitamin and Mineral Needs

- Eat a Rainbow: include a variety of colorful fruits and vegetables to ingest a wide range of vitamins and minerals.
- Choose Whole Grains: choose unprocessed ingredients for better nutrient density.
- Include Fortified Foods: boost intake of nutrients like iron and vitamin D with fortified options (e.g., cereals, breads, plant-based milk).
- Balance Your Diet: combine carbs, protein and healthy fats at each meal; see the 'Fueling to Thrive During BMT' section for details.
- Select the 'Healthier Choice' Option: these meals are nutritionally analyzed to meet vitamin and mineral needs.

Vitamins and Minerals

During BMT, prioritizing key nutrients supports optimal health and peak physical and mental performance.

Key Vitamins and Minerals for Recruits

Iron

Energy Production, Immune Health, Temperature Regulation, Oxygen Delivery to Muscles

Key Facts:

- Iron exists as heme (animal sources) and non-heme (plant/ egg sources). Non-heme iron has lower absorption, requiring 1.8x more in plant-based diets.
- Intense training, sweat loss, and menstruation increase iron deficiency risk, especially in females, who needs are 50% higher than males.
- Iron deficiency can impair endurance, performance, mood and bone health, with 13% of female recruits experiencing iron deficiency during BMT.

Sources in the Dining Hall:

- Beef, poultry, fish, eggs, beans, peas, lentils, tofu, nuts, seeds, spinach, whole grains, dried fruits, oatmeal and fortified breads and cereals

Tips to Boost Iron:

- Include protein in every meal (e.g., meat, eggs, lentils)
- Pair iron-rich foods with vitamin C (e.g., citrus fruits, peppers, broccoli) to enhance absorption
- Choose whole grains or fortified cereals
- Avoid coffee/tea with meals to reduce tannins interfering with iron absorption
- Include dark leafy greens, like spinach or kale, to your meals
- Snack on dried fruits and nuts for extra non-heme iron

Vitamin D & Calcium

Bone Health, Immune Function, Muscle Activity, Hormone Responses, Nerve Transmission

Key Facts:

- Vitamin D is mostly obtained through sunlight exposure as dietary sources are limited. Recruits may face barriers to adequate levels due to sunscreen use, uniforms, and limited outdoor exposure.

Sources in the Dining Hall:

- Vitamin D: mushrooms, eggs and fortified dairy products, plant-based milks, orange juice, and cereals.
- Calcium: milk, yogurt, cheese, kale, broccoli, cabbage, tofu, fortified plant-based milks and cereals, nuts, seeds, dried fruits.

Tips to Boost Vitamin D:

- Spend time (10-30 mins) in the sunlight
- Eat fatty fish, egg yolks and mushrooms
- Choose fortified milks and cereals

Tips to Boost Calcium:

- Snack on nuts and dried fruits
- Include leafy greens and plant-based proteins
- Choose fortified products (dairy and alternatives, cereals and tofu)
- Consume dairy products or alternatives with each meal

Maintaining sufficient calcium and vitamin D levels reduces the risk of injuries, stress fractures, and illnesses during BMT.

Antioxidants

Protect cells from damage caused from metabolism, exercise, and environmental factors.

Key Facts:

- Antioxidants (AO) like vitamin A, C, E and selenium reduce oxidative stress, inflammation and muscle damage while boosting endurance, immune function and recovery.

Sources in the Dining Hall:

- Plant-Based Foods (e.g., fruits, vegetables, herb, spices, whole grains, nuts, seeds, legumes)

Tips to Boost Antioxidants:

- Eat a Variety of Colorful Fruits and Vegetables - examples:
  - Berries: packed with AO like vitamin C and anthocyanins
  - Leafy Greens: rich in AO such as lutein & zeaxanthin
  - Citrus Fruits: excellent source of vitamin C
- Include Nuts and Seeds:
  - Almonds & Walnuts: great sources of vitamin E and omega-3's
  - Chia and Flax Seeds: rich in lignans and other AO's
- Drink Green or Herbal Teas: rich in catechins that benefit health
- Use Herbs and Spices: turmeric, cinnamon, ginger and cloves are all antioxidant rich
- Add Legumes: rich in polyphenols and isoflavones
- Choose Whole Grains: contain selenium and phenolic acids
- Use Healthy Oils: high in polyphenols