



Healthy Bones. Healthy Life.

Bone-Smart Recipes & Tips





Making Bone Health a Priority

Nutrition is a key component in bone health and in managing osteoporosis.

With a food-first approach for healthy bones, **Thinkbeef.ca** is proud to partner with **Osteoporosis Canada** to help develop this recipe resource.

Osteoporosis Canada works to educate, empower and support individuals and communities on bone health and in the risk-reduction and treatment of osteoporosis. Thinkbeef.ca is a nutrition education program of Canada Beef, which represents the beef farmers and ranchers of Canada.

All the recipes here were developed by Emily Richards, Professional Home Economist (emilyrichardscooks.com).



Good bones provide the foundation for good health, giving the strength and resilience necessary to live fully and independently. Nutrition and exercise are key to healthy bones and the prevention and management of osteoporosis, a disease that can result in a loss of bone mass leading to fractures.

The Protein-Bone Connection

Did you know you need protein, in addition to calcium and vitamin D, to keep your bones strong and healthy? Protein gives bone its strength and flexibility and is also the big component of muscles, which are crucial for mobility and in preventing falls.

As you age, your bones and muscles start to change and in your mid-30's both women and men begin to lose bone mass.

Staying active, and choosing to eat a healthy diet with enough protein and calcium and getting the daily recommended amount of vitamin D will help keep bones and muscles strong. Of note, vitamin D is recommended to be supplemented to get the daily recommended amount.

How do I get enough protein?

Many foods contain protein. Examples include beef, pork, poultry, eggs, fish, milk products, as well as beans, lentils, nuts, seeds, tofu and other soy products.

Protein rich foods are almost always a better choice than protein supplements. Food not only tastes better, but is usually less costly and less processed. Foods also contain a mix of naturally occurring vitamins and minerals that work together for health benefits, whereas protein supplements provide only protein. A sizzling steak wins out on taste and nutrients versus the protein supplement!

Timing matters – research shows our bodies make the best use of protein when it is spread throughout the day. For optimal benefits, incorporate quality protein foods at each meal and even with snacks.



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Start early! Getting enough calcium and vitamin D during childhood and adolescence helps our bodies achieve optimal bone mass. This in turn helps reduce the risk of developing osteoporosis later in life.



Think Protein Density.

Protein foods are not all equal. Here's how much you need to eat from various foods for the same amount of protein (35 g).

Do a protein checklist

For those with smaller appetites - young children and older adults for example, be sure to consider that the food on your plate at each meal makes a valuable contribution to your health.

On average, Canadians eat protein amounts in the lower end of the recommendations. To ensure you are eating enough protein each day, aim to get at least 20 g of protein at each of your three meals. If you eat fewer than three meals, try to add a high protein snack or two into your routine.

For example, a roast beef and cheese sandwich provides about 30 g of protein. For a smaller appetite, pair a half sandwich with 1 cup of milk, Greek yogurt or soy beverage fortified with calcium and vitamin D.

Not all protein foods are equal

Animal products are 'complete protein' foods, meaning they contain all the essential amino acids our bodies require to function properly.

Most plant-based protein foods are 'incomplete' and need to be mixed and matched to meet all of your amino acid needs. Some exceptions include quinoa and buckwheat and soy products like tofu or tempeh.

It's also important to consider that animal-based protein foods, like meats and milk products, are more protein dense than plant-based protein foods, meaning a smaller volume of food is necessary to meet your protein needs. Consider the chart on the next page.

	AMOUNT	CALORIES
<p>Beef (cooked)</p>	<p>100 grams = 1 serving* (the size of your palm)</p>	250
<p>Almonds</p>	<p>over 1 cup (3.3 servings); 1/3 cup (50 grams) = 1 serving*</p>	960
<p>Peanut butter</p>	<p>over 9 tbsp (9.4 servings); 1 tbsp = 1 serving*</p>	860
<p>Hummus</p>	<p>1 3/4 cups (14.2 servings); 2 tbsp = 1 serving*</p>	740
<p>Black beans (cooked/canned)</p>	<p>over 2 cups (4.3 servings); 1/2 cup = 1 serving*</p>	520

Source: Health Canada, Canadian Nutrient File, 2015, Beef 6172, Almonds 2534, Peanut Butter 6289, Hummus 4870, Black Beans 3377. Nutrient amounts rounded as per 2016 CFIA labelling rounding rules
 *Table of Reference Amounts for Food: <https://www.canada.ca/en/health-canada/services/technical-documents-labelling-requirements/table-reference-amounts-food/nutrition-labelling.html>

If you have a small appetite, choosing only plant-protein food sources requires careful planning to ensure you are meeting all of your protein needs.

Prep Time: 20 minutes | Cook time: 8 minutes | Serves: 4 (8 to 10 skewers)

Per serving (2 skewers or 1/5th recipe): 230 calories, 15g fat, 5g saturated fat, 50mg cholesterol, 410mg sodium, 5g carbohydrate, 2g fibre, 2g sugars, 18g protein, 175mg calcium, vitamin A 21% DV, vitamin C 75% DV, iron 11% DV



Grilled Beef and Halloumi Skewers



Looking to be bone-smart? With the protein contribution from both cheese and beef, and the calcium boost from cheese, this recipe packs a one-two punch for bone health. BONUS: Grilled beef + grilled cheese + grilled veg are a delish (and nourishing) combo.

INGREDIENTS

½ cup (75 mL) plain yogurt
½ tsp (2 mL) grated lemon zest
2 tbsp (30 mL) lemon juice
¼ cup (60 mL) canola oil, divided
2 cloves garlic, minced
1½ tsp (5 mL) dried oregano leaves
½ tsp (2 mL) EACH salt and pepper, divided
1 lb (500 g) 1 inch (2 cm) thick **Beef Grilling Steak** (e.g. Top Sirloin or Strip Loin), cut into cubes
1 bunch rapini, trimmed
1 EACH large red, and yellow sweet pepper, cut into 1½-inch (4 cm) pieces
1 pkg (200 g) halloumi cheese, cut into 1½-inch (4 cm) pieces
8 to 10 button mushrooms

METHOD

In a shallow glass dish, whisk together yogurt, lemon zest and juice, with 2 tbsp (30 mL) of the oil, garlic, oregano and ¼ tsp (1 mL) each of the salt and pepper. Add beef and toss to coat well. Cover and refrigerate for at least 15 minutes or up to 1 hour.

In a pot of boiling water, blanch rapini for 3 minutes. Drain well and pat dry. Toss rapini with remaining oil. Set aside.

Preheat barbecue to medium-high (400°F/200°C). Thread alternating pieces of beef, halloumi and sweet peppers onto metal or soaked bamboo skewers; discard any remaining marinade. Grill skewers, turning occasionally, for about 8 minutes for medium-rare 145°F (63°C) or to desired doneness. Transfer to platter and let rest 5 minutes. Meanwhile, grill rapini, turning occasionally, for 2 minutes until just lightly charred; sprinkle with salt and pepper and serve with the skewers.



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Regular exercise including strength training, balance training, posture awareness and aerobic physical activity is needed to keep bones strong and can help prevent falls.

Prep Time: 15 minutes | Cook time: 25 minutes | Serves: 4

Per serving (1/4 recipe with 2 slices toast): 550 calories, 25g fat, 8g saturated fat, 270mg cholesterol, 1030mg sodium, 38g carbohydrates, 3g fibre, 11g sugars, 42g protein, calcium 225mg, vitamin A 19% DV, vitamin C 110% DV, iron 34% DV.



Fast-fry Steak & Eggs Skillet



This hearty protein-packed one skillet meal is perfect for breakfast, lunch or dinner. Often used by restaurants to make hot steak sandwiches, Fast-fry steaks are traditional steaks that are cut thinly so they cook quickly. Look for the words 'Fast-fry' or 'Sandwich Steak' on the label. Eye of Round Fast-fry steaks also work well in this recipe. If there are leftovers, tuck them into a bun for a delicious lunchtime sandwich the next day.

INGREDIENTS

4 **Beef Fast-fry Steaks** (e.g.Strip Loin Fast-fry or Top Sirloin Fast-fry Steaks), about ¾ lb (400 g) total
1 tsp (5 mL) Italian seasoning
½ tsp (2 mL) EACH salt and pepper, divided
2 tbsp (30 mL) canola oil, divided
1 small onion, chopped
3 cloves garlic, minced
1 yellow or green sweet pepper, diced
1 can (19 oz/540 mL) petite cut tomatoes
3 tbsp (45 mL) chopped fresh basil or parsley
4 large eggs
½ cup (125 mL) crumbled feta cheese
Coarsely chopped fresh basil or parsley (optional)
4 slices sourdough bread, toasted

METHOD

Sprinkle steaks with Italian seasoning and half each of the salt and pepper.

Heat 1 tbsp (15 mL) of the oil in a large nonstick skillet on medium high heat. Sear steaks on both sides and remove to a plate, keep warm.

Return skillet to medium heat and add remaining oil. Cook onion, garlic and yellow pepper for 5 minutes or until softened. Stir in tomatoes, basil and remaining salt and pepper. Bring to a boil, reduce heat and simmer for 10 minutes or until starting to thicken.

Return steaks and accumulated juices to the skillet and in between steaks make little indents and place an egg in each. Cover and cook for about 4 minutes or until eggs are set or cooked to desired doneness. Uncover and sprinkle with cheese and basil, if using. Serve with toasted bread.



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Eggs are one of the few natural food sources of vitamin D, which is essential for calcium absorption.

This shrimp stuffed beef roast is Surf & Turf all rolled up in one! This roast is a perfect special occasion dinner with family or friends. Serve with mashed potatoes to sop up the flavourful sauce and roast juices.



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DYK: Shrimp is a source of calcium, phosphorus and magnesium – three minerals important to bone health.

Surf & Turf Rolled Roast Beef



INGREDIENTS

2 tbsp (30 mL) butter
2 cloves garlic, minced
1 lb (500 g) large raw shrimp, peeled, deveined and tails removed
½ tsp (2 mL) Old Bay Seasoning
1 **Eye of Round or Sirloin Tip Beef Oven Roast**, about 2 lb (1 kg)
⅓ cup (75 mL) grated Parmesan cheese

3 tbsp (45 mL) chopped fresh parsley
¼ tsp (1 mL) EACH salt and pepper
⅓ cup (75 mL) fine diced red sweet pepper
4 tsp (20 mL) Montreal steak spice, divided
Horseradish Herb Sauce (see below)

METHOD

In a nonstick skillet, melt butter over medium heat and cook garlic for 30 seconds. Add shrimp and seasoning; cook, stirring for 4 minutes or until shrimp are pink and firm. Set aside to cool.

Using a large chef's knife, slice roast lengthwise, stopping when you are about ½ inch (1 cm) from bottom of the roast. Open the roast up like a book and cut one side to "unroll" the roast to be about ¾ inch (2 cm) thick piece of meat. Do the same with the other side so that you end up with a rectangular piece of meat that is about ¾ inch (2 cm) thick. Using the flat side of a meat mallet, pound the roast to about ½ inch (1 cm) thickness.

In a food processor, chop shrimp by pulsing until coarsely chopped. Add cheese, parsley, salt and pepper. Pulse until combined well. Stir in red pepper; set aside.

Sprinkle inside of roast with 1 tsp (5 mL) of the steak spice. Spread evenly with shrimp mixture. Roll up jelly roll style lengthwise and tie with kitchen string at 2 inch (5 cm) intervals. Season outside of roast all over with remaining steak spice.

Place roast on rack in shallow pan or foil-lined rimmed baking sheet; oven-sear in preheated 450°F (230°F) oven for 10 minutes. Reduce heat to 275°F (140°C) and cook for about 1 hour and 15 minutes or until meat thermometer reaches 145°F (63°C) for medium-rare doneness. Remove from oven; cover loosely and let stand 15 minutes before slicing. Serve sliced beef with any pan juices and Horseradish Herb Sauce (see below).

Horseradish Herb Sauce: In a saucepan, melt 2 tbsp (30 mL) butter over medium heat and stir in 2 tbsp (30 mL) all-purpose flour. Cook, stirring for 1 minute. Whisk in 1½ cups (375 mL) 2% milk and cook, whisking occasionally for about 5 minutes or until starting to bubble. Remove from heat and stir in 2 tbsp (30 mL) chopped parsley, 1 tbsp (15 mL) horseradish, and ¼ tsp (1 mL) EACH salt and pepper.

Prep Time: 30 minutes | Cook time: 1 hour 40 minutes | Serves: 6 to 8

Per serving (1/6th recipe with sauce): 450 calories, 20g fat, 10g saturated fat, 205mg cholesterol, 930mg sodium, 6g carbohydrate, 0g fibre, 4g sugars, 57g protein, 175mg calcium, vitamin A 19% DV, vitamin C 19% DV, iron 25% DV.

Prep Time: 15 minutes | Cook time: 20 minutes | Serves: 4 to 6

Per serving (1/4 recipe): 730 calories, 31g fat, 10g saturated fat, 135mg cholesterol, 880mg sodium, 65g carbohydrate, 3g fibre, 12g sugars, 46g protein, 450 mg calcium, vitamin A 28% DV, vitamin C 19% DV, iron 25% DV.



Arugula and Roasted Red Pepper Meatball Pasta



This easy skillet dinner is perfect for any night of the week. The beefy meatballs are a snap to make by dropping and browning them in the pan – there's no time-consuming shaping required.

INGREDIENTS

1 lb (500 g) **Lean Ground Beef**
2/3 cup (150 mL) grated Parmesan cheese, divided
1/4 cup (60 mL) seasoned dry breadcrumbs
1 large egg
1 tsp (5 mL) garlic powder
1/2 tsp (2 mL) salt, divided
1/4 tsp (1 mL) hot pepper flakes
3 cups (750 mL) penne or cavatappi (Scoobi-Doo) pasta
2 tbsp (30 mL) canola oil
1 small onion, thinly sliced
2 cloves garlic, minced
2 tbsp (30 mL) all-purpose flour
2 1/2 cups (625 mL) 2% milk
2 cups (500 mL) lightly packed baby arugula or spinach
1/2 cup (125 mL) thinly sliced roasted red peppers

METHOD

In a large bowl, mix the beef with 1/3 cup (75 mL) of the cheese, breadcrumbs, egg, garlic powder, 1/4 tsp (1 mL) of the salt and hot pepper flakes until well combined.

Meanwhile, in a large pot of boiling water, cook penne for about 10 minutes or until al dente. Drain well and return to pot.

In a large nonstick skillet, heat oil over medium high heat. Using a small ice cream scoop or heaping tablespoon (15 mL) measure, drop scoops of ground beef mixture into skillet to make meatballs. Brown all over and then remove to plate and set aside. Reduce heat to medium and add onion and garlic. Cook, stirring for about 3 minutes or until starting to brown. Stir in flour to coat. Whisk in milk and bring to a simmer. Return meatballs and remaining 1/4 tsp (1 mL) of salt to skillet and simmer gently, stirring often for about 6 minutes or until meatballs are fully cooked to 160°F (71°C) when tested with a digital instant-read thermometer.

Stir in cooked pasta, arugula, roasted red peppers and remaining 1/3 cup (75 mL) Parmesan cheese to coat well. Sprinkle with more Parmesan if desired to serve.



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The calcium in some foods, such as spinach, sesame seeds, and swiss chard is not well absorbed because of their very high oxalate content, which binds the calcium. For better food sources of calcium choose milk products, broccoli, almonds or legumes like chickpeas and white beans.



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Eat up! Many studies show that women and seniors do not consume enough protein. Ensure you are including protein at each meal to meet your daily needs.



Prep Time: 15 minutes | Cook time: 18 minutes | Serves: 4

Per serving (1/4 recipe): 590 calories, 35g fat, 8g saturated fat, 90mg cholesterol, 1250mg sodium, 34g carbohydrate, 4g fibre, 6g sugars, 35g protein, 100mg calcium, vitamin A 5% DV, vitamin C 89% DV, iron 29% DV.



Sheet-pan Beef & Veggie Stuffed Pita

Instead of barbecued burgers, cook these patties together with veggies in this easy sheet-pan dinner. For an added kick of flavour be sure to serve with a drizzle of sriracha mayo.

INGREDIENTS

1 small red onion, sliced
1 orange or yellow sweet pepper, sliced
1 zucchini, sliced
1 tsp (5 mL) salt, divided
¼ tsp (1 mL) pepper
2 tbsp (30 mL) canola oil, divided
1 lb (500 g) **Lean Ground Beef**
½ cup (75 mL) grated or finely diced onion
3 cloves garlic, minced
2 tbsp (30 mL) EACH chopped fresh parsley and basil
2 tsp (10 mL) chili powder
½ tsp (2 mL) grated lime zest
½ cup (125 mL) hummus
2 pocket style pita breads, cut in half

Sriracha Mayo:

½ cup (125 mL) light mayonnaise
1 tbsp (15 mL) sriracha

METHOD

Sriracha Mayo: In a bowl, whisk together mayonnaise and sriracha. Cover and refrigerate until ready to use.

On a foil or parchment paper lined baking sheet, toss onion, pepper, zucchini, ½ tsp (2 mL) of the salt and pepper with 1 tbsp (15 mL) of the oil.

In a large bowl, using your hands mix together beef, onion, garlic, parsley, basil, chili powder, lime zest and remaining salt until well combined. Divide and shape into 8 patties about 3 inches (7.5 cm) in diameter. Use your thumb press centres slightly. Place patties on top of the vegetables and brush with remaining oil.

Roast in preheated 425°F (220°C) oven for about 18 minutes or until vegetables are tender crisp. Wrap pita halves in foil and add to the oven in the final 5 minutes of cooking just to warm them. To finish, place under a pre-heated broiler for 3 to 5 minutes just until beef and vegetables are sizzling and crisped up, and each patty is cooked to 160°F (71°C), when tested with a digital instant read thermometer inserted sideways.

To serve, spread the inside of each pita half with hummus, add a scoop of veggies and 2 patties.



Skillet Perogy Shepherd's Pie



This one-pot wonder will be a new family favourite that your children will continue to make for years to come. It is a dinner classic with a twist – the perogies taking the place of traditional mashed potatoes. It's ready in less than 30 minutes.

INGREDIENTS

1 tbsp (15 mL) canola oil
1 lb (500 g) **Lean Ground Beef**
1 onion, diced
4 cloves garlic, minced
½ tsp (2 mL) EACH dried thyme and sage leaves
2 cups (500 mL) frozen diced mixed vegetables, thawed slightly
2 cups (500 mL) beef broth
⅓ cup (75 mL) all-purpose flour
½ tsp (2 mL) EACH salt and pepper
24 frozen potato and cheese perogies
1 cup (250 mL) shredded Cheddar cheese
Sour cream and thinly sliced green onions (optional)

METHOD

In a large deep oven-safe nonstick skillet, heat oil over medium-high heat. Cook beef, onion, garlic, thyme and sage for about 5 minutes or until beef is no longer pink. Stir in mixed vegetables to cook.

In a small bowl, whisk together broth, flour, salt and pepper until smooth. Pour into skillet and stir to coat. Bring to a simmer, stirring. Place perogies into beef mixture in a concentric circle over top. Cover skillet with lid and simmer gently for about 12 minutes or until perogies are tender and puffed. Uncover and sprinkle cheese over perogies.

Place skillet about 6 inches (15 cm) under preheated broiler for about 4 minutes until cheese is melted and top is light golden. Let cool slightly before serving dolloped with sour cream and green onions if desired.

Prep Time: 10 minutes | Cook time: 25 minutes | Serves: 4 to 6

Per serving (1/6 recipe): 490 calories, 20g fat, 8g saturated fat, 60mg cholesterol, 990mg sodium, 53g carbohydrate, 4g fibre, 7g sugars, 27g protein, 175mg calcium, vitamin A 6% DV, vitamin C 5% DV, iron 26% DV.



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Osteoporosis Canada recommends Canadian adults take a vitamin D supplement year round: 400 – 1,000 IU per day for those 19-50 years of age, and 800 – 2,000 IU daily for those over 50 or younger adults at high risk of osteoporosis.



Stir-fried Pineapple Beef Noodles

Prep Time: 15 minutes | Cook time: 10 minutes | Serves: 4

Per serving (1/4 recipe): 470 calories, 12g fat, 2.5g saturated fat, 50mg cholesterol, 820mg sodium, 58g carbohydrates, 2g fibre, 9g sugars, 29g protein, 20mg calcium, vitamin A 5% DV, vitamin C 52% DV, iron 21% DV.



If you like a kick of spice then be sure to add the Thai chili pepper to this easy to make noodle dish. Sweet and juicy pineapple is a wonderful balance with tender stir-fried beef.

INGREDIENTS

- 1 lb (500 g) **Beef Strip Loin** or **Top Sirloin Grilling Steak**
- 2 tbsp (30 mL) canola oil, divided
- 2 cloves garlic, minced
- 1 tbsp (15 mL) minced fresh gingerroot
- ½ tsp (2 mL) salt
- 1 Thai chili pepper, thinly sliced (optional)
- 8 oz (250 g) rice stick noodles (Pad Thai-style noodles, 5 mm thick)
- ½ cup (125 mL) beef broth
- 2 tbsp (30 mL) lime juice
- 2 tbsp (30 mL) fish or soy sauce
- 1 tbsp (15 mL) red Thai curry paste
- 2 cups (500 mL) fresh or canned pineapple chunks
- ¼ cup (60 mL) fresh cilantro leaves
- 2 tbsp (30 mL) chopped fresh mint (optional)
- 1 small red sweet pepper, thinly sliced
- ½ cup (125 mL) julienned cucumber
- Hoisin sauce (optional)

METHOD

Slice steak as thinly as possible across the grain and place in bowl. Add 1 tbsp (15 mL) of the oil, garlic, gingerroot, salt and chili pepper (if using) and toss to coat; set aside.

Place noodles in a large bowl and cover with very hot water; let stand for 10 minutes. Drain and rinse with cold water. Drain again and set aside.

Whisk together broth, lime juice, fish sauce and curry paste; set aside. Heat a large deep nonstick skillet over medium-high heat. Sear beef until browned all over and transfer to plate. Add remaining oil and sauté noodles for 1 minute. Add broth mixture and pineapple chunks; bring to a boil. Return beef to noodles and toss well to coat and heat through. Stir in cilantro leaves and mint (if using).

Top each serving with red pepper and cucumber to serve. Drizzle each with hoisin sauce if desired.



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Men get osteoporosis too. At least one in five men will break a bone due to osteoporosis in their lifetime.



Healthy Bones. Healthy Life.

Good bones are the foundation for strength and resilience.

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Osteoporosis Canada, a registered charity, is the only national organization working to make bone health a priority for Canadians and serving people who have, or are at risk for osteoporosis. [Thinkbeef.ca](https://www.thinkbeef.ca) is proud to partner with Osteoporosis Canada to help provide educational materials for Canadians concerned about their bone health.