

## Nutrition Content for CMC Website

### 1. Red meat is a staple, foundational food in Canadians' diet

A substantial body of evidence shows the nutrients in red meat, such as high-quality protein, iron, zinc and B-vitamins, play a powerful role in nourishing Canadians – from fueling physical activity and helping manage weight, to developing cognitive skills and aging vibrantly.<sup>1,2,3,4</sup> As one of the most nutrient dense foods available, red meat makes an important contribution to the food security and diet quality of Canadians.

### 2. Canadians enjoy red meat in moderation

On average Canadians eat 41 g of unprocessed red meat per day and 20 grams of processed red meat.<sup>5</sup>

Average Red Meat Intake in Canada	
Unprocessed red meat* (g/day)	41.1
Processed red meat** (g/day)	19.9
TOTAL g/day	61.0
TOTAL g/week	427

Sources: Statistics Canada. 2018. Customized analysis of 2015 Canadian Community Health Survey - Nutrition data.

\*Includes beef, veal, pork and lamb including ground meat and burgers.

\*\*Includes salted beef, bacon (but not turkey or chicken bacon), ham, sausages (not turkey or meatless), and luncheon meats (not considered poultry).

### 3. Canadians are not eating too much protein

Contrary to popular perception, Canadians do not eat too much protein. On average, Canadian adults get only about 17% of their total daily calories from protein according to the most recent national survey.<sup>6</sup> That is at the lower end of the recommended 10-35% of calories from protein for adults.<sup>7</sup>

### 4. Healthy eating pattern includes protein foods such as lean meats

The Food Guide dedicates ¼ of the plate to a variety of powerful proteins like pork, beef, dairy foods, fish, poultry, eggs, along with nuts, seeds and pulses. It was not intended to promote ultra-processed simulated meat products.

<sup>1</sup> Westerterp-Plantenga MS, et al. 2006. Dietary protein, metabolism, and body-weight regulation: dose–response effects. *Int J Obes.* 30:S16-S23.

<sup>2</sup> Paddon-Jones D, et al. 2008. Protein, weight management, and satiety. *Am J Clin Nutr.* 87:1558S-61S.

<sup>3</sup> Georgieff MK. Iron deficiency in pregnancy. *Am J Obstet Gynecol.* 2020.

<sup>4</sup> Bradlee, ML et al. High-protein foods and physical activity protect against age-related muscle loss and functional decline. *J Gerontol A Biol Sci Med Sci*, 2017; 73(1):88-94.

<sup>5</sup> Statistics Canada. 2018. Customized analysis of 2015 Canadian Community Health Survey - Nutrition data.

<sup>6</sup> Statistics Canada. 2017. Nutrient intakes from food, 2015. Health fact sheets.

<sup>7</sup> Institute of Medicine. 2005. Dietary Reference Intakes for energy, carbohydrate, fiber, fat, fatty acids, cholesterol, protein, and amino acids. Washington, DC: The National Academies Press.

## 5. Meat addresses nutrient shortfalls

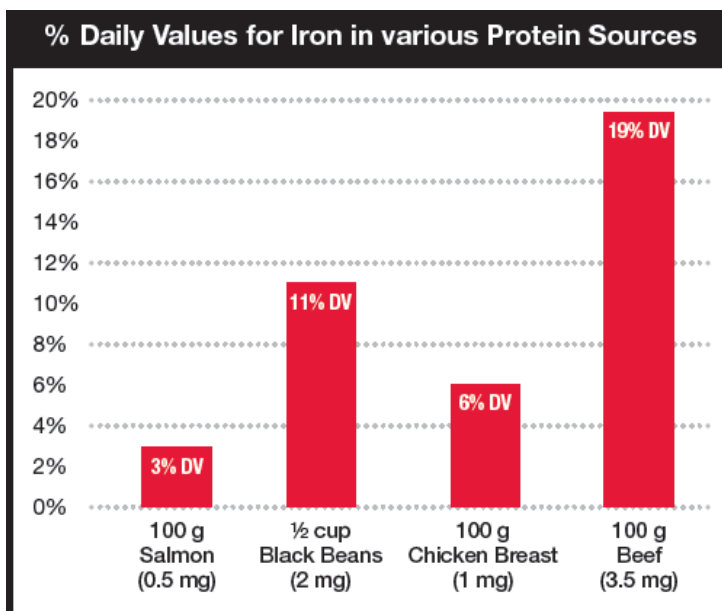
According to an analysis of the Canadian Community Health Survey (CCHS) - Nutrition data, a significant number of Canadian adults are at risk of inadequate nutrient intakes.<sup>8</sup> Meat contains many of the nutrients that many Canadians need more of in their diets – iron, zinc, magnesium, potassium, and the B vitamins - B12, B6 and thiamin.

## 6. Meat helps balance the plate

Research suggests people who eat more red meat, also tend to eat more vegetables, and have a lower BMI and waist circumference than those who eat less red meat.<sup>9</sup>

## 7. Iron source matters

Meat contains a more absorbable form of iron than plant foods. The bioavailability of the heme iron found in meat is substantially higher than the non-heme iron found in cereals, legumes and tofu.<sup>10</sup> Without meat in their diets, vegetarians need almost 2 times more iron in their diets than meat eaters.<sup>11</sup> Compare the iron content of these four protein choices:



<sup>8</sup> Ahmed M et al. Nutrient intakes of Canadian adults: Results from the Canadian Community Health Survey (CCHS)-2015 Public Use Microdata File. *Am J Clin Nutr* 2021;114(3):1131-1140.

<sup>9</sup> Kappeler R et al. Meat consumption and diet quality and mortality in NHANES III. *Eur J Clin Nutr* 2013;67:598-606.

<sup>10</sup> Health Canada. 2014. Nutrition for healthy term infants: Recommendations from six to 24 months. A joint statement of Health Canada, Canadian Paediatric Society, Dietitians of Canada and Breastfeeding Committee for Canada.

<sup>11</sup> Institute of Medicine. 2001. Dietary Reference Intakes for vitamin A, vitamin K, arsenic, boron, chromium, copper, iodine, iron, manganese, molybdenum, nickel, silicon, vanadium, and zinc. Washington, DC: The National Academies Press.

Sources: Health Canada. Canadian Nutrient File, 2015. Food Codes Salmon 3053 (sockeye (red), baked or broiled), Black Beans 3377 (boiled), Chicken Breast 842 (broiler, meat, roasted), Beef 6172 (composite cuts, steak/roast, lean and fat, cooked).

## 8. Many women have inadequate intakes of key nutrients found in meat

- Nearly 30% of women 19 to 50 years do not get enough iron from their diet.
- At least 30% of women (and 20% of men) have inadequate zinc intakes from their diet.
- As many as 21% of women have inadequate intakes of vitamin B12 from their diet.<sup>12</sup>

Red meat makes a valuable contribution to help meet nutrient needs throughout life.

## 9. If baby is in your future, think iron now!

Women who plan to become pregnant really need to prioritize good food sources of iron. Foods like beef, lamb, pork and veal. While we need iron at every stage of life – women of childbearing age need more than twice as much iron as men. Dietary recommendations advise women 19 to 50 years of age to aim for 18 mg of iron per day, and even more during pregnancy – 27 mg of iron per day. However, two recent studies published by University of Toronto researchers in 2021 revealed many Canadian women of childbearing age are not getting enough iron in their diets. Researchers found that:

- Iron deficiency affects more than 50% of pregnant women who were tested in Ontario.<sup>13</sup>
- Nearly 30% of Canadian women aged 19 to 50 years do not get enough iron from their diet.<sup>14</sup>

## 10. Babies need more iron than a man

Babies 7 to 12 months need almost 40% more iron than a full-grown man.<sup>15</sup> In fact, Health Canada recognizes the critical importance of offering iron-rich foods such as meat to babies as their first solid foods starting at 6 months,<sup>16</sup> and through the toddler years.<sup>17</sup>

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<sup>12</sup> Ahmed M et al. Nutrient intakes of Canadian adults: Results from the Canadian Community Health Survey (CCHS)-2015 Public Use Microdata File. *Am J Clin Nutr* 2021;114(3):1131-1140.

<sup>13</sup> Teichman J et al. Suboptimal iron deficiency screening in pregnancy and the impact of socioeconomic status in a high-resource setting. *Blood Adv* 2021;5(22):4666-4673.

<sup>14</sup> Ahmed M et al. Nutrient intakes of Canadian adults: Results from the Canadian Community Health Survey (CCHS)-2015 Public Use Microdata File. *Am J Clin Nutr* 2021;114(3):1131-1140.

<sup>15</sup> Institute of Medicine. 2001. Dietary Reference Intakes for vitamin A, vitamin K, arsenic, boron, chromium, copper, iodine, iron, manganese, molybdenum, nickel, silicon, vanadium, and zinc. Washington, DC: The National Academies Press.

<sup>16</sup> Health Canada. 2012. Nutrition for healthy term infants: Recommendations from birth to six months. A joint statement of Health Canada, Canadian Paediatric Society, Dietitians of Canada and Breastfeeding Committee for Canada.

<sup>17</sup> Health Canada. 2014. Nutrition for healthy term infants: Recommendations from six to 24 months. A joint statement of Health Canada, Canadian Paediatric Society, Dietitians of Canada and Breastfeeding Committee for Canada.

## 11. Veggies and meat are better together

Thanks to what is known as the ‘meat factor’, meat enhances the absorption of non-heme iron from plant foods.<sup>18</sup> This synergistic relationship is one of the reasons that consuming whole foods such as meat and vegetables or legumes in combination can be more beneficial than eating them separately. The benefits are compounded.

Reducing meat consumption further is not warranted and may have a negative impact on the health of those Canadians with inadequate dietary intakes of protein, iron, zinc, vitamin B6, and vitamin B12; notably older adults and women.<sup>19</sup> Consequences of these nutrient shortfalls include low energy levels, reduced work capacity, lower resistance to infections, fatigue, sarcopenia and osteoporosis.<sup>20,21,22</sup>

## 12. Plant-based proteins ≠ animal proteins.

Plant and animal proteins are not equivalent. Animal proteins contain all nine essential amino acids in amounts that closely match human requirements. These essential amino acids remain available for absorption and protein synthesis even after digestion. Evidence suggests high quality animal-based proteins stimulate muscle protein synthesis more effectively than plant-based proteins.<sup>23</sup>

Be mindful of plant-based claims on foods like cookies or potato chips – calorie-rich, nutrient-poor, made from plants!

## 13. Plant-based simulated meat products try, but fail, to be real meat

Red meat is often imitated but never duplicated. Although these plant-protein foods are often perceived and marketed as healthier options to meat, most of these products are largely ultra-processed. Nothing can match the taste, simple satisfaction and nourishment provided by meat.

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<sup>18</sup> Health Canada. 2014. Nutrition for healthy term infants: Recommendations from six to 24 months. A joint statement of Health Canada, Canadian Paediatric Society, Dietitians of Canada and Breastfeeding Committee for Canada.

<sup>19</sup> Evidence Review for Dietary Guidance Technical Report, 2015, Health Canada.

<sup>20</sup> Institute of Medicine. 2001. Dietary Reference Intakes for Vitamin A, Vitamin K, Arsenic, Boron, Chromium, Copper, Iodine, Iron, Manganese, Molybdenum, Nickel, Silicon, Vanadium, and Zinc <https://www.nap.edu/read/10026/chapter/1>

<sup>21</sup> Institute of Medicine. 2001. Dietary Reference Intakes for Thiamin, Riboflavin, Niacin, Vitamin B6, Folate, Vitamin B12, Pantothenic Acid, Biotin, and Choline <https://www.nap.edu/read/6015/chapter/1>

<sup>22</sup> Institute of Medicine. 2005. Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein, and Amino Acids. Washington, DC: The National Academies Press. <https://doi.org/10.17226/10490>.

<sup>23</sup> Berrazaga, Insaf et al. The role of the anabolic properties of plant- versus animal-based protein sources in supporting muscle mass maintenance: A critical review. *Nutrients* vol. 11,8 1825. 7 Aug. 2019.