Lean Beef and Heart Health: A Fresh Perspective

Fresh red meat is not associated with CHD risk

Researchers from the Harvard School of Public Health recently concluded that consuming 100 g per day of fresh red meat is not linked to the development of CHD or type 2 diabetes. This finding is the result of the largest systematic review and meta-analysis of the worldwide evidence to examine how eating fresh red meat – such as beef, pork and lamb – and processed meat (i.e., hot dogs, bacon, salami, sausages, luncheon meats) relates to the risk of CHD and type 2 diabetes.

The finding that fresh red meat is not associated with CHD calls into question results from previous studies that grouped fresh and processed meats together.

The British Nutrition Foundation concludes red meat makes a positive contribution to health

A recent review published by the British Nutrition Foundation concluded that the relationship between red meat and health is a positive one. A moderate intake of lean red meat makes a significant positive contribution to both micronutrient and macronutrient intakes without negative health effects.

NEW RESEARCH:
- Harvard review finds fresh red meat intake of 100 g per day is not associated with coronary heart disease (CHD) risk.
- Lean red and white meats have equal effects on blood cholesterol.
- Canadian red meat intakes are moderate, in line with Canada’s Food Guide and similar to those of Mediterranean countries.

BOTTOM LINE:
Messages to limit fresh red meat are not an effective way to reduce CHD risk and distract from other, more effective strategies to improve overall diet quality.

Note: The term “fresh” in this newsletter refers to unprocessed, single-ingredient meat (i.e., roasts, steaks, chops, stewing, ground, etc.), and it may be fresh or frozen. “Red meat” includes beef, pork, veal and lamb.
Causal evidence for meat and CHD outcomes is weak

In another recent systematic review, Canadian researchers categorized the causal evidence for various dietary exposures and their associations with primary and secondary CHD outcomes as strong, modest or weak. The analysis pooled prospective cohort data on a variety of dietary variables and CHD outcomes for 236,414 individuals and concluded the evidence for meat and CHD is weak. A recent prospective cohort study of 40,653 individuals in Australia also found no association between meat intakes and cardiovascular mortality.

Lean red meat and white meat have equal effects on blood cholesterol

Eight randomized controlled trials (RCTs) have demonstrated lean red meat, such as beef, is as effective as lean white meat (poultry and fish) as part of healthy diets for managing blood cholesterol levels. The most recent, Beef in an Optimal Lean Diet (BOLD), led by distinguished researcher Penny Kris-Etherton, found that heart healthy diets that include lean beef as the primary protein are as effective in lowering total and LDL cholesterol as the DASH diet that emphasizes white meat and plant protein. Participants following the BOLD and BOLD+ diets (113 g and 153 g beef/day, respectively) experienced a 10% decrease in LDL cholesterol. These reductions were of the same magnitude as those observed with the DASH diet, recognized as a “gold standard” for heart health.

Giving patients permission to choose lean red and white meats may improve their acceptance and long-term dietary adherence.

Canadian red meat intake is moderate

On average, Canadian women eat less than one serving of red meat (fresh and processed) a day (55 g), and men eat about 1½ servings a day (101 g). In fact, average Canadian red meat intakes are moderate, similar to average intakes in Mediterranean countries such as Greece, Spain and Italy, and in some cases they are lower.

<table>
<thead>
<tr>
<th>Meat Category</th>
<th>Female Adults</th>
<th>Male Adults</th>
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</thead>
<tbody>
<tr>
<td>Fresh red meat</td>
<td>40 g/day</td>
<td>73 g/day</td>
</tr>
<tr>
<td>Processed red meat</td>
<td>15 g/day</td>
<td>28 g/day</td>
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<tr>
<td>Total red meat</td>
<td>55 g/day</td>
<td>101 g/day</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Countries</th>
<th>Total Red Meat Intakes for Women (g/day)</th>
<th>Total Red Meat Intakes for Men (g/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>55</td>
<td>101</td>
</tr>
<tr>
<td>Spain</td>
<td>67</td>
<td>127</td>
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<tr>
<td>Italy</td>
<td>60</td>
<td>91</td>
</tr>
<tr>
<td>Greece</td>
<td>31</td>
<td>55</td>
</tr>
</tbody>
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Note: Intakes in this chart include fresh and processed red meat.
Red meat contributes little fat to Canadian diets

- Fresh red meat contributes only 8% of total fat and 9.5% of saturated fat on average for adults.¹⁴
- On average, a Food Guide serving of beef (75 g, cooked, trimmed of visible fat) has just 170 calories, 6.3 g total fat and 2.6 g saturated fat.¹⁵

Two-thirds of the fat in lean beef does not raise LDL cholesterol

- About half (49%) is monounsaturated fat, mostly oleic acid, the same fat found in olive oil.
- About a third (30%) of the saturated fat is stearic acid, which does not raise LDL cholesterol.¹⁸,¹⁹
- The other main saturated fat in beef, palmitic acid, increases HDL as well as LDL cholesterol, therefore having little effect on the ratio of total to HDL cholesterol.²⁰


Canadians keep it lean

- 71% buy lean or extra-lean ground beef.¹⁶
- Almost 80% trim visible fat from beef before and/or after cooking.¹⁷

Source: Health Canada, Canadian Nutrient File, 2010. (Values for beef eye of round steak, beef top sirloin steak, chicken broiler light meat, and chicken broiler dark meat.)
Moderately higher protein intakes may improve heart health

Recent evidence suggests the Recommended Dietary Allowance for adult protein intakes, 0.8 g/kg/day, significantly underestimates requirements by as much as 50%. With average intakes of less than 17% of energy from protein, many Canadians have protein intakes at the lower end of the current Acceptable Macronutrient Distribution Range of 10% to 35% of energy from protein.

Higher protein intakes, within the recommended range, may help increase satiety, reduce hunger and lower energy intakes. RCTs have demonstrated that replacing some carbohydrates with protein may improve a number of cardiovascular risk factors, for example by lowering blood pressure and improving glycemic control and blood triglyceride levels.

PRACTICE POINTS
Clients can benefit from advice to:
• Make most of their meat choices fresh (i.e., unprocessed).
• Choose both lean red and white meats.
• Consume moderately higher protein intakes.

In summary:
• Fresh red meat intakes are moderate and contribute only 8% of total and 9.5% of saturated fat on average for adults.
• Higher protein intakes may benefit heart health.
• Advising patients to avoid or limit fresh red meat is unnecessarily restrictive and is not an effective strategy to lower CHD risks.

Time for a new approach
The traditional nutrient-focused guidance is often confusing and distracts from more effective messages aimed at today’s overfed, undernourished population.

Calories consumed from “Other Foods” such as soft drinks, chocolate bars, potato chips, and added fats and sugars are second only to calories from grain products.

If overall dietary patterns are more important than single dietary components, it makes sense for our dietary guidance to focus on food, not nutrients. Clients can benefit from advice on how to enjoy whole, minimally processed foods more often. This results in diets naturally lower in salt, trans fat, saturated fat, added sugar and refined carbohydrates and higher in fibre, unsaturated fats, minerals, antioxidants and phytochemicals. This type of positive guidance can also lead to diets that are naturally more satiating and lower in energy.
References


