All Things Grass Fed Synthesis

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Health Benefits of Grass Fed

● High consumption of saturated fats in America\(^1\)
● Animal protein consumption decreasing\(^1\)
● Cholesterol alteration varies by different types of SFAs\(^1,2,\&3\)
● 4 major types: lauric acid, myristic acid, palmitic acid, and stearic acid\(^1,2,\&3\)
● Lauric and myristic acid raise cholesterol more than palmitic; stearic acid has neutral effect\(^1,2,\&3\)
● 60% of SFA intake from animal fats\(^4\&5\)
  ○ Most of which is palmitic and stearic acid
Health Benefits of Grass Fed

- Different finishing processes alter fatty acid composition\textsuperscript{6}
- Grass finished beef has lower fat content than grain finished beef\textsuperscript{7-13}
  - In addition, the SFA profile is more desirable with less myristic and palmitic acid and more stearic acid
- Omega 3 FA content higher in grass finished meat\textsuperscript{7-10,12-15}
  - Omega 6 content unaffected by feeding processes, making n-3 to n-6 ratio more favorable.
- Grass finished meat higher in carotene, precursor for Vitamin A production\textsuperscript{16,17}
  - Carotene rich in green forage, minimal in grain
  - Yellowish fat profile caused by carotenoids


V. Kelley DS, Simon VA, Taylor PC, Rudolph IL, Benito P: Dietary supplementation with conjugated linoleic acid increased its concentration in human peripheral blood mononuclear cells, but did not alter their function. Lipids 2001, 36:669-74


Health Benefits of Grass Fed

- Red meat is nutrient dense, rich in amino acids, vitamins A, B6, B12 D, E, iron, zinc, and selenium\(^6,I\)
- Cholesterol content of beef is similar to or less than other meats\(^{II,III}\)
  - Beef 73mg/100g; pork 79mg/100g; lamb 85mg/100g; chicken 76mg/100g; turkey 83mg/100g
- Higher concentration of Conjugated Linoleic Acid [CLA], a nutrient that potentially reduces the risk of cancer\(^{IV-VII}\)
- Vitamin E is more concentrated in grass finished meat\(^{10,VIII-XIII}\)
- Glutathione [GT], an antioxidant that protects the cell and DNA from damage, abundant in grass fed meat\(^{XIV,XV}\)