Meat Consumption—Health, Environmental and Ethical considerations

Jay Hollman MD

Therefore, if what I eat causes my brother to fall into sin, I will never eat meat again, so that I will not cause him to fall. 1 Cor. 8:13
Meat Consumption

PROP 2 PASSES!
It’s an historic day for farm animals in California.
American Veterinary Medical Association on Proposition 2

‘Proposition 2 would clearly provide greater freedom of movement, but would likely compromise several other factors necessary to ensure the overall welfare of the animals, especially with regard to protection from disease and injury. …’

‘We are concerned that legislating isolated, arbitrary and emotion-based criteria to implement farm animal housing systems may actually do more harm than good for the well-being of animals while compromising the sustainability of production systems that are essential to ensure we continue to have the safest, most affordable, and abundant food supply in the world.’
Meat Consumption:

Egregious examples of animal abuse
Meat Consumption:
Factory farming
Arguments against Factory Farming

- **Justice:** dogs and pigs are equally sentient
- Cruelty to animals is a punishable offense
- A true sense of dominion and mutuality between species

Matthew Scully: *Dominion* 1992
Cock Fighting
For the piglets, it’s a regimen of teeth cutting, tail docking (performed with pliers, to heighten the pain of tail chewing and so deter this natural response to mass confinement), and other mutilations. After five or six months trapped in one of the grim warehouses that now pass for barns, they’re trucked off, 355,000 pigs every day in the life of America, for processing at a furious pace of thousands per hour by migrants who use earplugs to muffle the screams. All of these creatures, and billions more across the earth, go to their deaths knowing nothing of life, and nothing of man, except the foul, tortured existence of the factory farm, having never even been outdoors.
Arguments against Factory Farming

• Justice: dogs and pigs are equally sentient
• Cruelty to animals is a punishable offense
• A true sense of dominion and mutuality between species
Cardinal Ratzinger

• While it is licit to use them for food, “we cannot just do whatever we want with them. ... Certainly, a sort of industrial use of creatures, so that geese are fed in such a way as to produce as large a liver as possible, or hens live so packed together that they become just caricatures of birds, this degrading of living creatures to a commodity seems to me in fact to contradict the relationship of mutuality that comes across in the Bible.”
Proverbs 12:10

10 The godly are concerned for the welfare of their animals, but even the kindness of the wicked is cruel. NLB
Meat consumption and Health

- NIH-AARP study of over 5 million people
- Age 50-71 at time of recruitment and followed for 10 years.
- California, Florida, Louisiana, New Jersey, North Carolina, Pennsylvania and the metro areas of Atlanta and Detroit.
Mortality for Men based on Processed meat consumption  
\( n = 322,263 \)
Confounding variables with heavy meat eaters

**Negative effects on mortality**
- smokers
- have a higher body mass index
- higher daily intake of energy
- higher total fat and saturated fat intake
- lower education level
- less physical activity
- lower fruit, vegetable and fiber intake

**Positive effects on mortality**
- Married
- White
Mortality Risk for Red Meat consumption: first v fifth quintal

![Bar Chart]

- **red meat consumption**

  - **x-axis:** first quintal, fifth quintal
  - **y-axis:** 0 to 1.4

  - **Legend:** red meat consumption
# Meat Intake and Mortality

n=545,653, Ratio of highest quintal to lowest, corrected for confounders

<table>
<thead>
<tr>
<th>Type of Risk</th>
<th>Men’s risk ratio</th>
<th>Women’s risk ratio</th>
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</thead>
<tbody>
<tr>
<td>Red meat—overall mortality</td>
<td>1.31 (1.27-1.35)</td>
<td>1.36 (1.30-1.43)</td>
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<tr>
<td>Processed Meat—overall mortality</td>
<td>1.16 (1.12-1.20)</td>
<td>1.25 (1.20-1.31)</td>
</tr>
<tr>
<td>Cancer risk—red meat</td>
<td>1.22 (1.16-1.29)</td>
<td>1.20 (1.12-1.39)</td>
</tr>
<tr>
<td>Cancer risk—processed meat</td>
<td>1.12 (1.06-1.19)</td>
<td>1.11 (1.04-1.19)</td>
</tr>
<tr>
<td>Cardiovascular Deaths—red meat</td>
<td>1.27 (1.20-1.35)</td>
<td>1.50 (1.37-1.65)</td>
</tr>
<tr>
<td>Cardiovascular Death—processed meat</td>
<td>1.09 (1.03-1.15)</td>
<td>1.38 (1.26-1.51)</td>
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</table>
American Heart Association Prudent Diet

Circulation 2006; 114:82-96

• Limit intake of saturated fat to <7% of energy, trans fat to <1% of energy and cholesterol to < 300 mg/day
  – Replace meats with beans, soy, nuts or fish
  – Minimize your intake of beverages and foods with added sugars
• Choose and prepare foods with little or no salt
• If you consume alcohol, do so in moderation
• Be careful on consuming food outside the home: order entrees with fish and chicken instead of beef.
Fish Consumption and Cardiac Mortality

Fish Consumption and Cardiac Mortality

- Omega-3 polyunsaturated fatty acid effect on platelets
- Replaces animal fats
- Reduces cardiac arrhythmias
Myths about environmental impact of meat on water

- 100,000 liters of water for at Kg of beef (widely cited based on beef production in Southern California)
- 900 liter for Kg of wheat
- 500 liters per kilogram of potatoes
- Actual average for kg of beef in the USA: 3,682 liters.

Inconvenient Facts about Meat

1. Since 1950, the average meat consumption in the USA has doubled.
2. China is increasing its meat consumption with an accompanying growth in Western disease.
3. More than 40% of children in poor countries are stunted by undernutrition.
4. American style of intense agriculture with feed lots and grain feeding etc. are replacing grazing especially in South America.
Calories from animal production

It takes 10 times as much farmland to produce a pound of animal protein compared to plant protein.
Four decades of change in the forests of Central America
Animal consumption and global warming

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<tbody>
<tr>
<td>Cattle</td>
<td>1906</td>
<td>75*†</td>
<td>8‡</td>
</tr>
<tr>
<td>Small ruminants (sheep and goats)</td>
<td>514</td>
<td>9</td>
<td>0.3</td>
</tr>
<tr>
<td>Pigs</td>
<td>590</td>
<td>1</td>
<td></td>
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<tr>
<td>Camels</td>
<td>13</td>
<td></td>
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</tr>
<tr>
<td>Horses</td>
<td>71</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poultry</td>
<td>61</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>3161</td>
<td>86</td>
<td>18</td>
</tr>
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</table>
Factory Farms and Pollution

- Excess manure pollutes the groundwater
- Phosphorous and nitrogen in the waterways threatens aquatic life with the depletion of oxygen.
Livestock in the USA


• 55% of erosion
• 37% of the pesticides applied
• 50% of the antibiotics used
• 32% of the nitrogen load and 33% of the phosphorous load into fresh water sources
Death attributable to anthropogenic climate change between 1970 and 2000, density equalizing cartoon

Lancet
2008;372:1677
Congruity of Science

1. Beef, cattle
2. Pigs, pork
3. Chicken
4. Fish

• Greater Health Risk
• Greater Environmental Damage
• More sentient
Most environmentally Friendly?

Range Feed beef in Mongolia  Feedlot in West Texas

More greenhouse gases
Choosing for animals might result in greater costs for the consumer.

- Kleinpeter does not use rBGH and thus has a lower production per cow. Its milk costs more than $1.50 per gallon compared to Borden.
Conclusions
What to do?
Wilberforce and Broome:
*Ill Treatment of Cattle Bill* 1822

- **Personal** Eat more simply with smaller meat portion sizes: more fruits and vegetables
- **Cultural** Influence others by example and education
- **Legislative**
  - Human treatment laws
  - Just costs for meats impact