



Last century, science and food policy focussed on protein and body growth.

H. Sapiens is about brain growth not body growth.

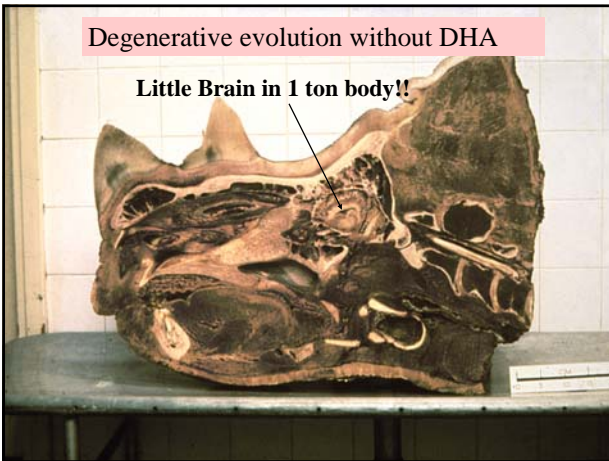
We need a revision of food policy.

Note the similar sizes of the brain case of the 1 year old and his mother. Note the sizes of the hands.

Which comes first – Body or Brain?

Different principles are involved in body growth versus brain growth.

Body = protein
Brain = lipids.
Priority is the brain

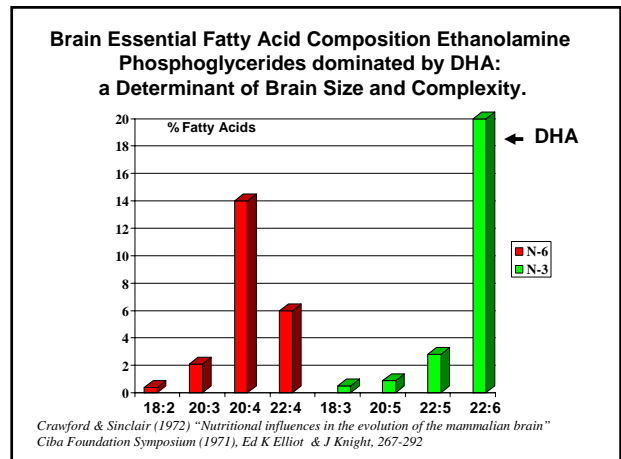


UNIQUE HUMAN BRAIN

- 60% IS MADE OF FAT OR "LIPID"
- TO BUILD PROTEIN YOU NEED ESSENTIAL AMINO ACIDS.
- TO BUILD BRAIN LIPID YOU NEED ESSENTIAL FATTY ACIDS (efa).
- THE BRAIN DEPENDS ON SPECIAL EFAS.
- THEREFORE THE PRIORITY IN HUMAN NUTRITION IS THE ESSENTIAL FATTY
- Brain damage, disorders, learning and behavioural disabilities escalate as birthweight falls. Yet successive Governments have ignored low birthweight leading to the UK having the highest incidence in Western Europe and on a par with Romania.

Essential Fatty Acids Arachidonic (AA) & Docosahexaenoic (DHA) from LINOLEIC & α -LINOLENIC ACIDS
 Burr & Burr 1930, James Mead 1954, Rudolph Brenner & Ralph Holman 1970s,

<p>PLANTS</p> <p>18:2 ω6 <i>Linoleic</i> Seeds</p> <p>18:3 ω3 <i>Alpha-linolenic</i> Green leaves (photosynthesis)</p>	<p>ANIMAL PRODUCTS</p> <p>20:4 ω6 \leftrightarrow 22:4 ω6 <i>Arachidonic</i> meat breast milk Cell regulation – reproduction, immune & vascular function</p> <p>EPA - Sea foods meat DHA Sea foods -Brain 20:5 ω3 \Rightarrow 22:5 ω3 22:6 ω3 <i>Eicosapentaenoic</i> \Downarrow <i>Docosahexaenoic</i> \Downarrow \Uparrow 24:5 ω3 \Rightarrow 24:6 ω3 Peroxisomes</p>
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Vision and the brain Evolved in the sea 600 million years ago using omega 3 DHA,

The brain still uses and depends on the same marine nutrients today

Food

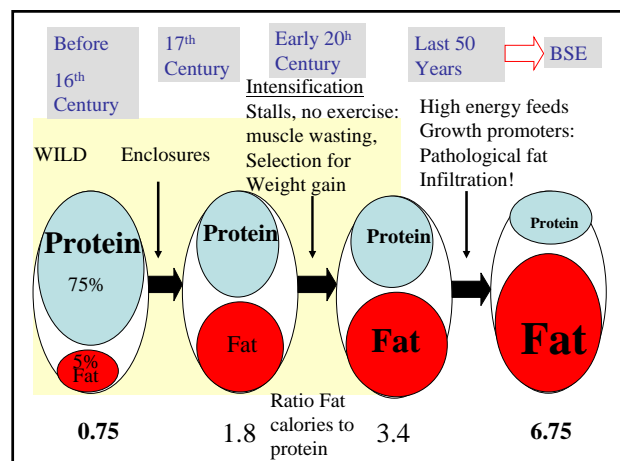
With a genome dating back for millions of years, human physiology is unequivocally adapted to wild foods.

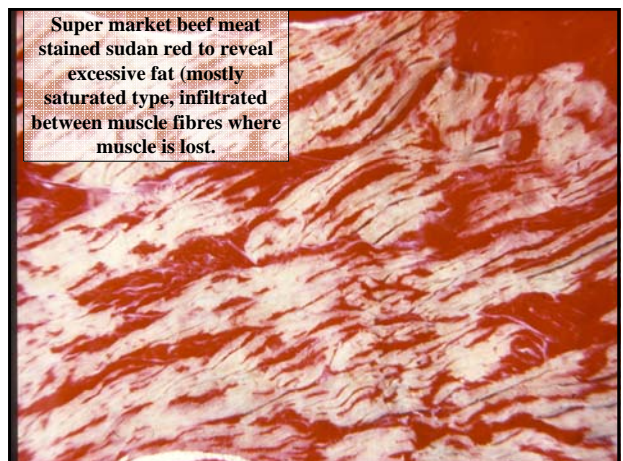
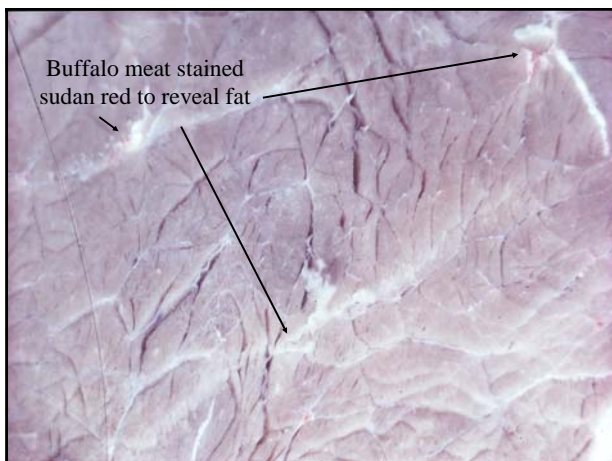
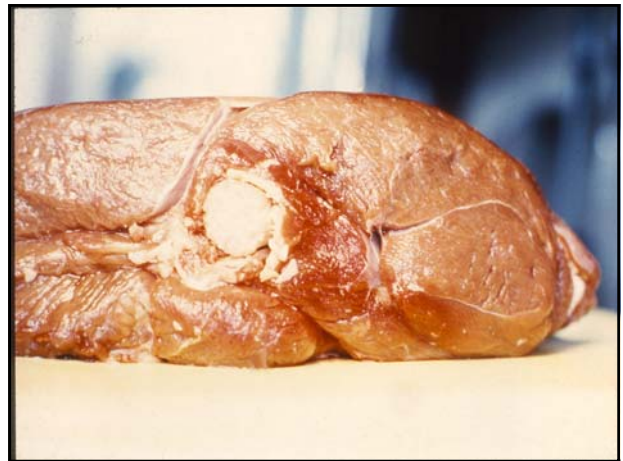
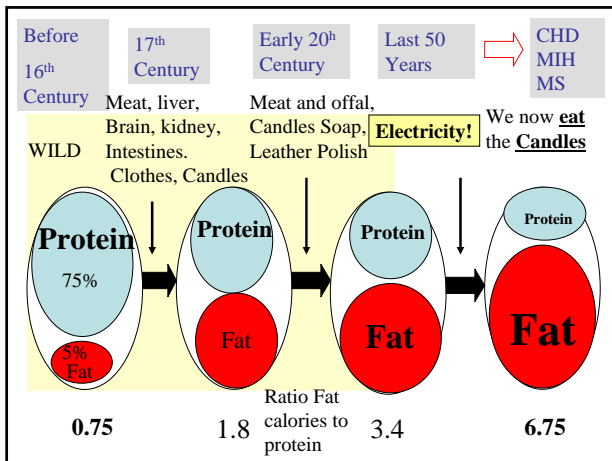
BEEF

	MODERN:	WILD:
CARCASS LEAN	50%	75%
FAT	30%	5%
PROTEIN EQUIV.	10	15
PROTEIN CALORIES	40	60
FAT CALORIES	270	45
FAT PROTEIN RATIO	6.75	0.75
INTENSIFICATION	= 9 FOLD FAT	

Table 3. Fat-Protein Calories in Chicken 1870-2004

Year	Data Source	(g/100g)/(Cal/100g)		Fat/Protein Ratio (energy)	Total Calories
		Fat	Protein		
1870	Letheby	3.8/34.2	21.0/84.0	0.4	118
1896	USDA	1.8/16.2	22.8/91.2	0.2	107
1940	M&W 1 st ed	10.3/92.7	26.2/104.8	0.9	198
1953	FAO	12.6/113.4	20.2/80.8	1.4	194
1970	IBCHN	8.6/77.4	24.3/97.2	0.8	175
1991	M&W 5 th ed	17.7/159.3	17.6/70.4	2.3	230
2002	M&W 6 th ed	16.9/152.1	20.9/83.6	1.8	236
2004	IBCHN organic	17.1/153.8	18.2/72.8	2.1	227
2004	IBCHN farmed	22.8/205.0	16.5/65.8	3.1	271



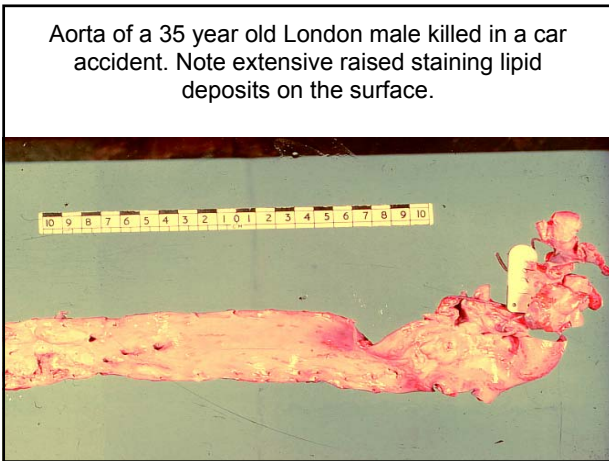




Lions eat wild meat



Aorta of a full grown, 25 year old African lion stained with sudan red for arterial atherosclerotic fatty lesions. Note staining taken up by fat depots on the back outside but not on the surface.



Aorta of a 35 year old London male killed in a car accident. Note extensive raised staining lipid deposits on the surface.

Eat Obesity
and Become
Obese

What Has Gone Wrong - Priorities?

These are just examples of the way in which the priority in food and agricultural policy has been dedicated to rapid production and economics leading to an across the board, distortion of the human food web.

Brain disorders have now overtaken all other burdens of ill health in the EU at a cost of €386 billion.

In the UK, the incidence of low birthweight has increased by nearly 20% since 1950. Low birthweight (ca. 54,000/year) is the most powerful predictor of disability, mental and physical ill health which includes diabetes, heart disease, stroke and common cancers which were rarities 100 years ago

It is higher than in any other Western EU country.

The health and abilities of children yet to be born is at stake.

- RECOMMENDATIONS**
- **EDUCATION:** restore colleges of domestic science with nutrition, health & hygiene back into the school and medical curricula.
 - **REVISION OF FOOD & AGRICULTURAL POLICY:** redefine the objective as production of nutrients for human health.
 - **FRESH WATER, ESTUARINE AND MARINE COASTAL PRODUCTIVITY.** A new policy of clean rivers, estuaries and coast line to restore and develop natural productivity.
 - **REDUCE LOW BIRTHWEIGHT** to 4% by economic, educational and nutritional means.