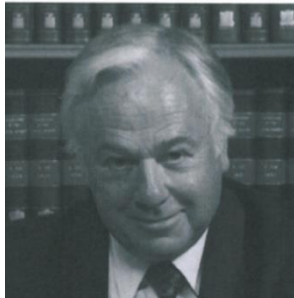
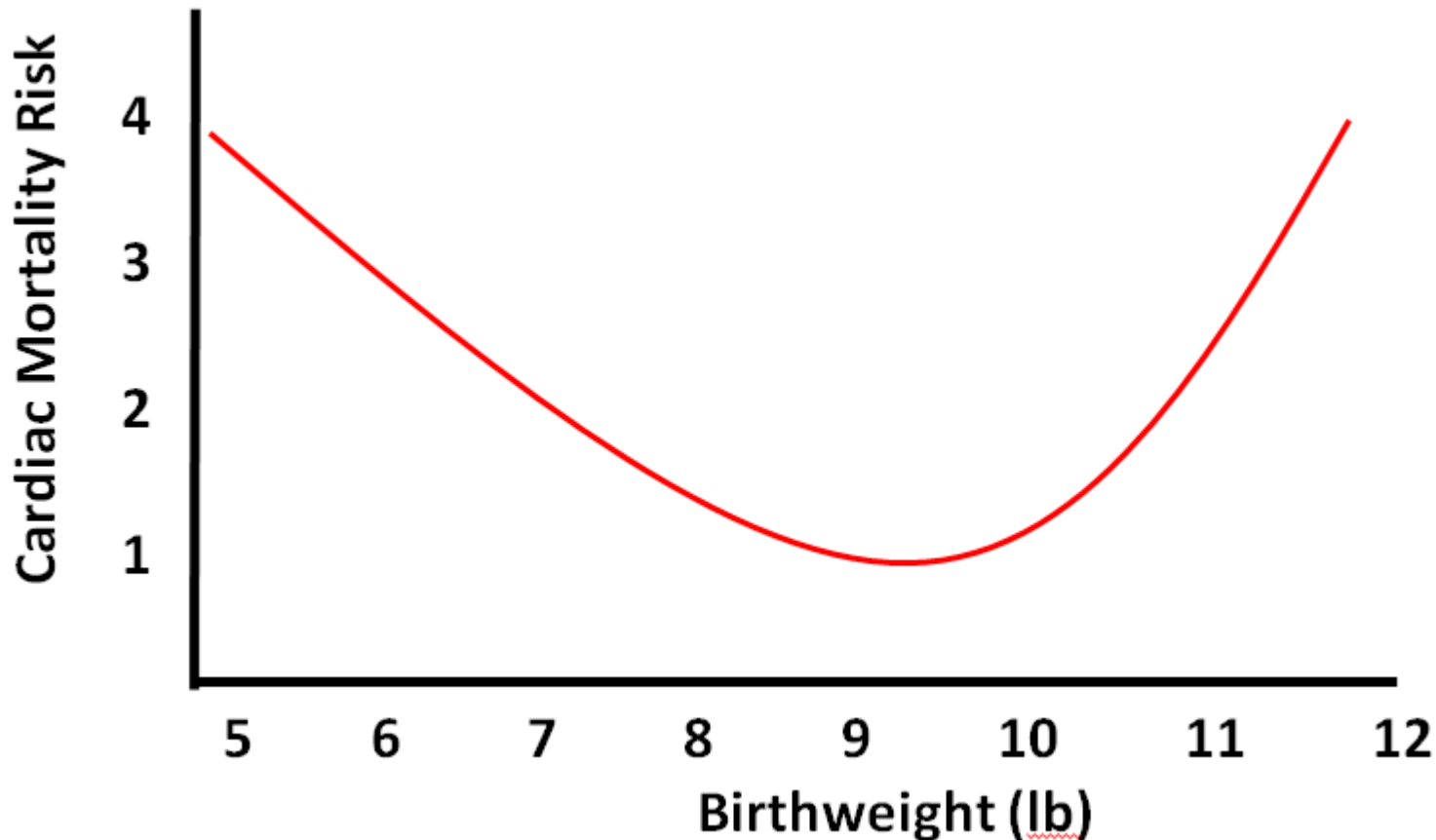


Early Life “Programming” of Heart Disease

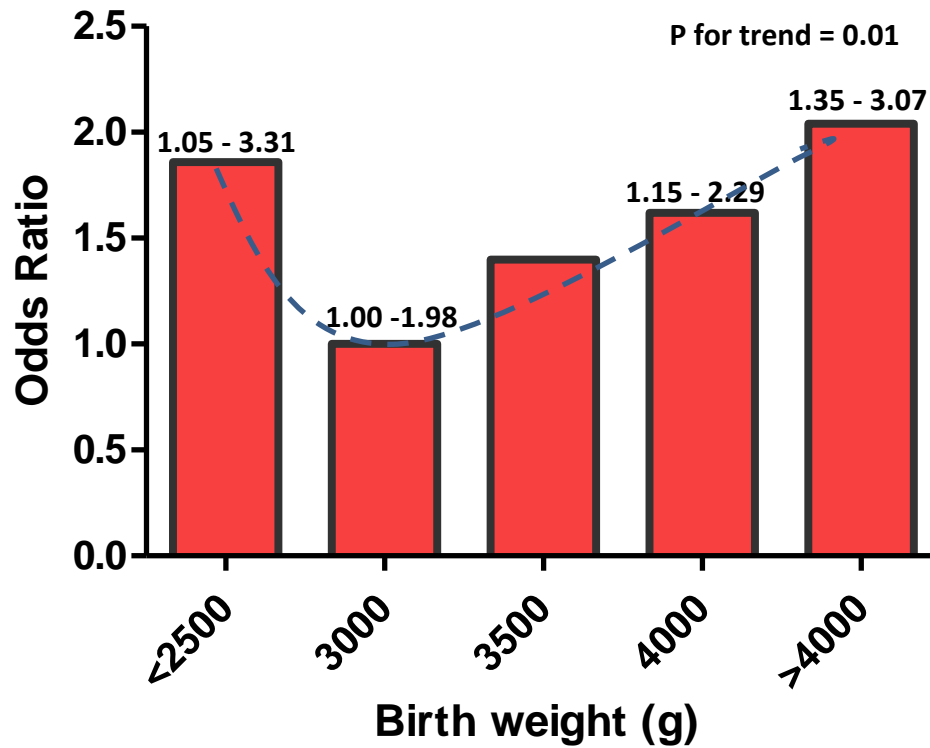


David JP Barker
1938-2013

U.K. Barker *BMJ*, 298:564, 1989
India: Stein. *Lancet* 348:1269, 1996
USA: Rich-Edwards *BMJ* 315: 396, 1997
Finland: Barker *Int J Epidemiol* 31: 1235, 2002
China: Fan *Ann of Med* 42: 596, 2010



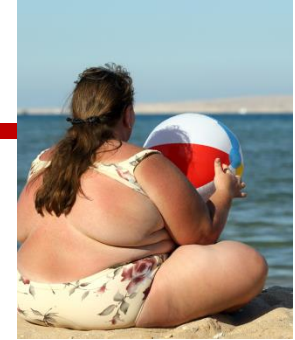
Risk of Obesity based on Birthweight in 1522 men born 1924-1934 Helsinki Birth Cohort



Malnutrition in the USA



Low BMI
Low muscle
Low fat mass

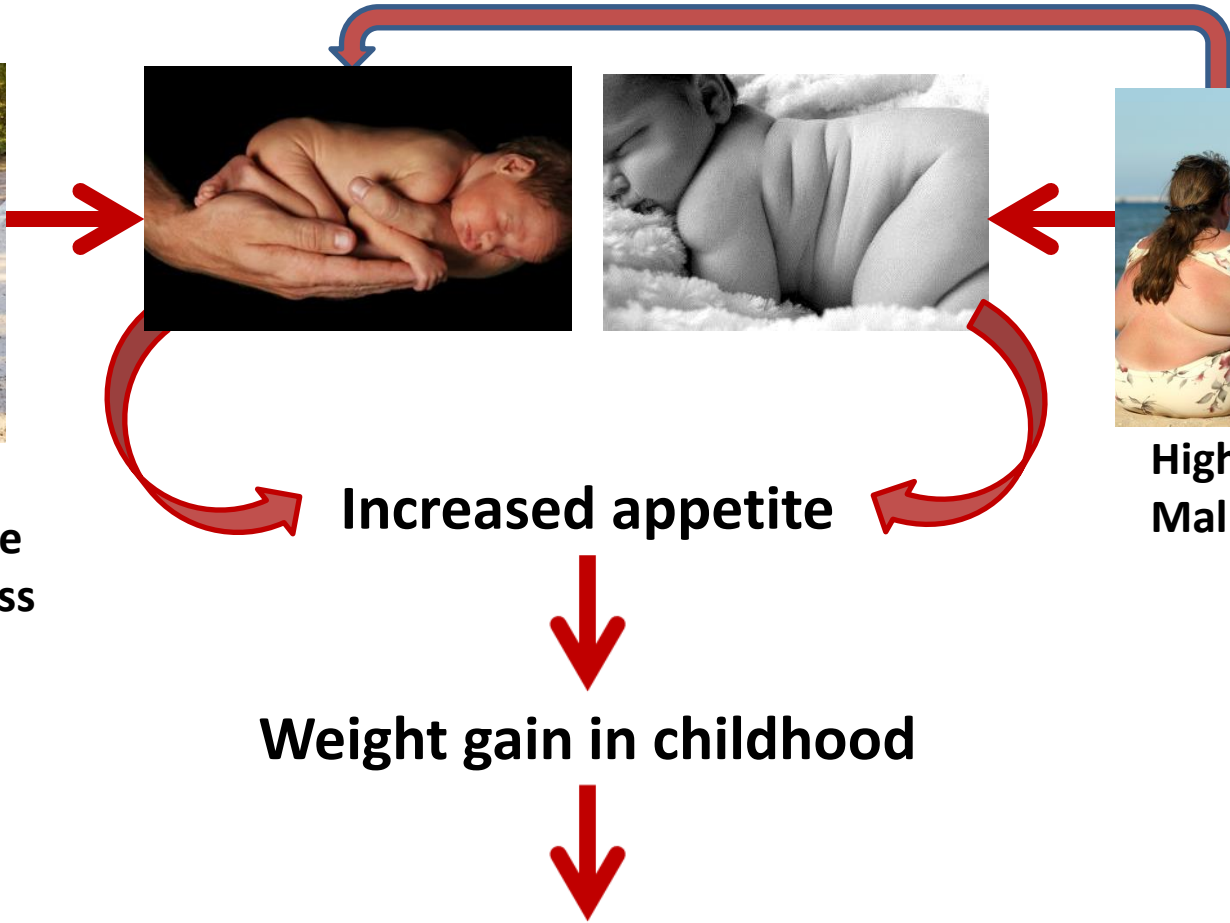


High Calorie
Malnutrition

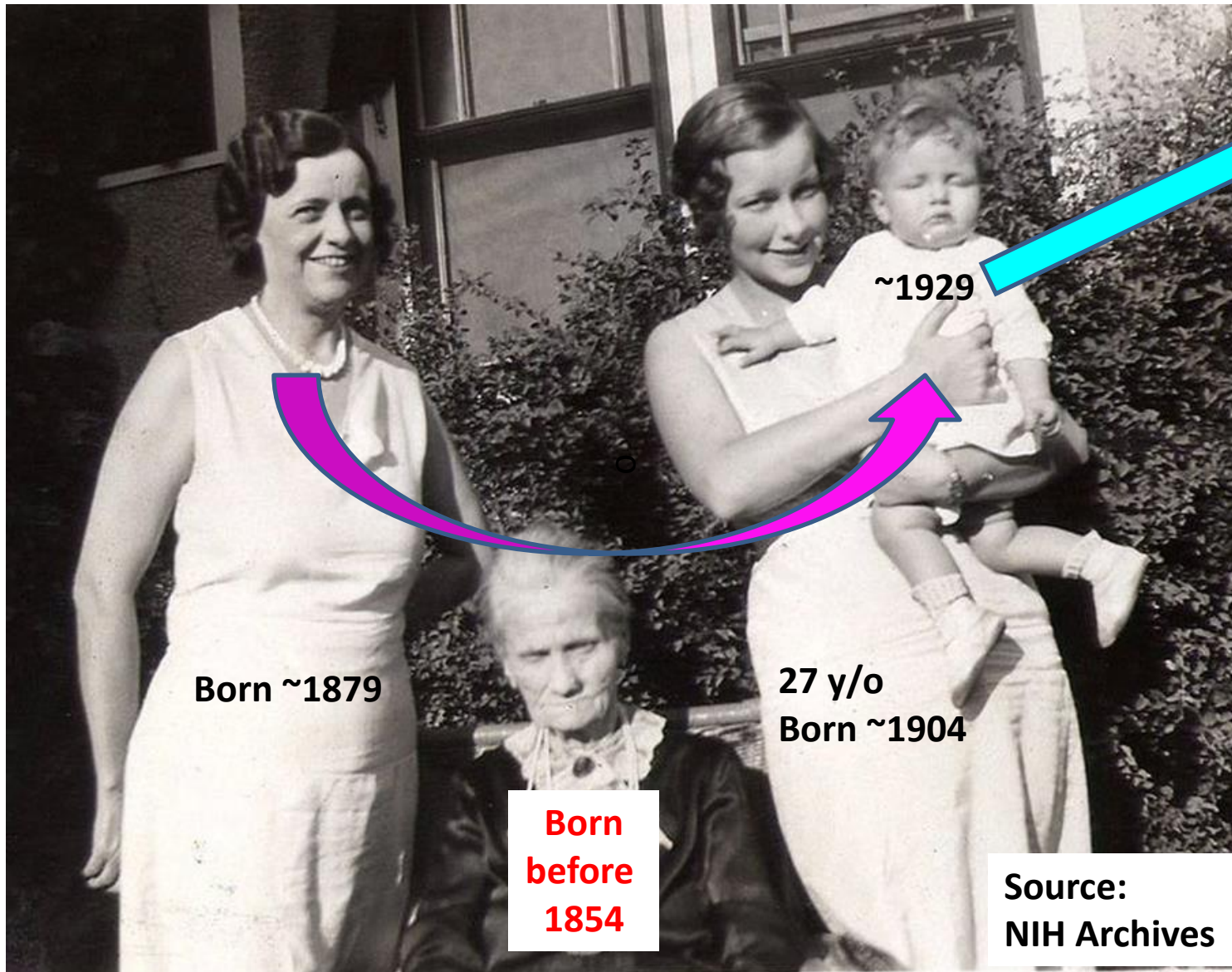
Increased appetite

Weight gain in childhood

Metabolic Disease



Four Generations of Women, (1931) Nutritional Flow Across Generations



Born ~1879

Born
before
1854

~1929

27 y/o
Born ~1904



^{CDC}
~87 y/o
in 2016

Her “egg age”
is
~110 years old.

Her egg was
nourished by her
grandmother.

Source:
NIH Archives