ALLERGY, GENETICS

WHY DO WE GET ASTHMA

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A book review of “Why we get sick” at tennov.com writes

> Bacteria can evolve as much in a day as we can in 1000 years and there are as many bacterial cells in each of our guts as there are people on earth. That even improbable mutations occur with frequency in populations of pathogens gives them a decided advantage […] As Nesse and Williams emphasize, the end of the war is nowhere in sight. The 20th century was the golden age of relief from infection, but it may be over and this may accurately be considered a “post-antimicrobiol era.”

The same fact in Mel Greaves’ writing (p 216)

> Natural selection will have operated against individuals who inherited fatal conditions that strike early in life, and for those whose immune systems were bext equipped to restrain the ravages of plagues. The geneticist and polymath, J B S Haldane, was surely correct in suggesting that infections have been the most powerful ‘natural’ selective pressure acting on human populations.

Unaware of the Haldane quote I raised that point also two years ago in a PLoS paper why we get asthma.

> Profound changes in the gene pool may be caused by changes in childhood mortality […]. At the beginning of the last century acute respiratory infections in Europe had been the main reason for childhood death, causing many children to die before reaching reproductive age. Vaccination programs, better nutrition, and antibiotic treatment, however, have reduced mortality from acute respiratory infection while the asthma incidence increased at the same time. […] Can these differences in childhood mortality explain the extremes of virtually no asthma up to a prevalence of 20%? This seems a testable hypothesis where even the rise or fall of gene variants in immune defence genes could be monitored.

Yea, yea.