Need baseline risk to understand meat or other cancer scares

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion and analysis.

If you paid attention at all to the news, you surely saw the headlines proclaiming that bacon causes cancer. The news came out of the ruling of a committee (the International Agency for Research on Cancer, IARC) for the World Health Organization.

One thing rarely communicated in these sorts of reports is the baseline level of risk. Let's use Grist's Nathanael Johnson's example and suppose that eating three pieces of bacon everyday causes cancer risk to increases 18 percent. From what baseline? To illustrate, let's say the baseline risk of dying from colon cancer (which processed meat is supposed to cause) is 2 percent so that two out of every 100 die from colon cancer over their lifetime (this reference suggests that's roughly the baseline lifetime risk for everyone including those who eat bacon). An 18 percent increase means your risk is now 2.236 percent for a 0.36 percentage point increase in risk. I suspect a lot of people that would accept a less-than-half-a-percentage point increase in risk for the pleasure of eating bacon.

But if the baseline risk was 10 percent, an 18 percent increase means your risk of cancer is now 11.8 percent for a 1.8 percentage point increase in chance of dying of colon cancer. Thus, the same percentage increase in risk (18 percent) results in very different changes in absolute likelihoods of dying depending on the baseline starting point. In a population of 1,000 people who started eating three pieces of bacon, in one case we'd have about 3.6 extra people die and 11.8 extra people die in the other. In short, studies that say that eating X causes a Y percent increase in cancer are unhelpful unless I know something about my underlying, baseline probably of cancer is without eating X.

Read full, original post: Meat and Cancer