

intervals. This means that there is a 95% probability that the true risk rate lies somewhere on that line. The Summary risk rate of 1.28 indicates a 28% increase in bowel cancer risk. This substantial increase is for much smaller amounts of red meat than allowed on the CSIRO diet.

But wait there's more

The CSIRO Total Wellbeing Diet is based, according to the CSIRO web site, on a published study of 100 women for 12 weeks[12]. The women were split into 2 groups. One followed a high meat diet and the other a high carbohydrate diet. Guess what? Both groups lost the *same* amount of weight.

A 12-month follow up study on the original 100 women has just been published[13]. Guess what? Both the control diet and the “magic” high protein diet group still lost the same amount of weight. Did you see a press release about this publication from CSIRO? They didn't do one. The actual research was done in 2002, and they have known all this time that there was nothing special about this diet — except that it causes cancer. Even the supposed special effectiveness at reducing weight in people with high blood fat levels (a big selling point of the diet) vanished in the follow up study. Who would have guessed!

The most destructive diet on the planet

75% of all deforestation in Australia has been for livestock. Between 1990 and 2004, the cattle industry deforested approximately 400,000 hectares of land annually in Australia in one of the biggest attacks on biodiversity in the country's history[14, 15]. The 3.1 million tonnes of methane produced annually by these animals generates more atmospheric warming than all of our coal fired power stations[16]. The CSIRO diet also recommends that people eat double the national average intake of fish. Australia already imports 55% of the fish it consumes from somebody else's ocean — there simply aren't enough fish in the sea to satisfy this level of exploitation. Dairy products are also big in the CSIRO diet. Dairy production in the Murray Darling Basin uses about 9 times more water than fruit and vegetable production combined — as well as far more than rice and cotton[17].

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Geoff Russell, June 2008

DOES CSIRO'S DIET CAUSE BOWEL CANCER?



What the CSIRO Board knew

Documents obtained under Freedom of Information legislation show that CSIRO researchers told the CSIRO Board the truth about high red meat diets in April 2006. Here's what they told the board:

“Recent findings from [our] scientists have established that diets high in red meat, processed meats and the dairy protein casein can significantly increase the risk of bowel cancer.”

What the CSIRO told the public

CSIRO's *Total Wellbeing Diet Book 2* claimed (p.37):

“Studies have shown that fresh red meat (beef and lamb) is not a significant risk factor for bowel cancer.”

Would CSIRO lie to the Australian public? ... read on.

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For more details than possible in this leaflet, see the April edition of “*The Monthly*” magazine or the peer reviewed scientific Journal, *Nutrition and Dietetics*[1].

Bowel Cancer in Australia

There are over 12,500 new cases of bowel cancer each year in Australia and over 4,300 deaths. The number of new cases is similar to breast and prostate cancer, but bowel cancer kills more than either of these. 50% more people get bowel cancer than get lung cancer. The lifetime risk of bowel cancer in Australia is 1 in 26 for women and 1 in 17 for men[2]. We have the highest rate of bowel cancer in the world[3].

World Cancer Research Foundation

Last year's *World Cancer Research Foundation* report into nutrition, lifestyle and cancer identified just 2 foods — in addition to alcohol — as being convincingly demonstrated to cause cancer. They were red meat and processed meat —

bacon, ham, salami, and the like.

Victorian Cancer Council

The Victorian Cancer Council has estimated that if all Australians limited their red meat consumption to 4 serves per week, we would have 1,500 fewer new cases of bowel cancer per year. If people limited their red meat to just 1 serve per week, we would see a further reduction of 4,500 cases. All up, this means that 6,000 new cases of bowel cancer per year — sixteen people every day — get bowel cancer due to red meat. About 5 people every day only find out about their bowel cancer by being rushed to hospital with a perforated or blocked bowel.

Red Meat causes DNA Damage

CSIRO researchers are testing and patenting products that you can eat with red meat to reduce the damage it does to the DNA in your colon[4]. They feed rats red meat, measure the DNA damage, and then test different products that might reduce the damage. This is a win-win situation for CSIRO. They can make money selling you a poison diet and make more selling you its antidote — the problem is that the products they are testing don't stop *all* the damage, and nobody knows if they work in people. All cancers start with damage to DNA in a single cell.

The NHMRC dietary guidelines

When the National Health and Medical Research Council (NHMRC) wrote the (still current) 2003 *Dietary Guidelines for Australian Adults* they ignored the only 2 meta-studies (which combine results from multiple individual studies) on the association between red meat and bowel cancer. Both studies, the best available evidence at the time, found a link between red meat and bowel cancer. Instead the NHMRC relied heavily on a report from an "expert panel" on the issue. Who organised the expert panel and paid the chairman? Meat and Livestock Australia[5]. Guess what the panel said? — *Not Guilty*. The CSIRO isn't the first organisation to act as an MLA flunky.

How is red meat like tobacco?

Many of the carcinogens in tobacco smoke are chemicals called NOCs (N-nitroso compounds). Researchers in the UK fed people varying amounts of red meat and then examined their faeces for NOCs. Here is what they found: *"The exposures found on the higher meat diets were comparable with other sources of N-nitroso compounds (NOC) such as tobacco smoke[6]"*.

Eating red meat is pretty much like smoking cigarettes through your anus.

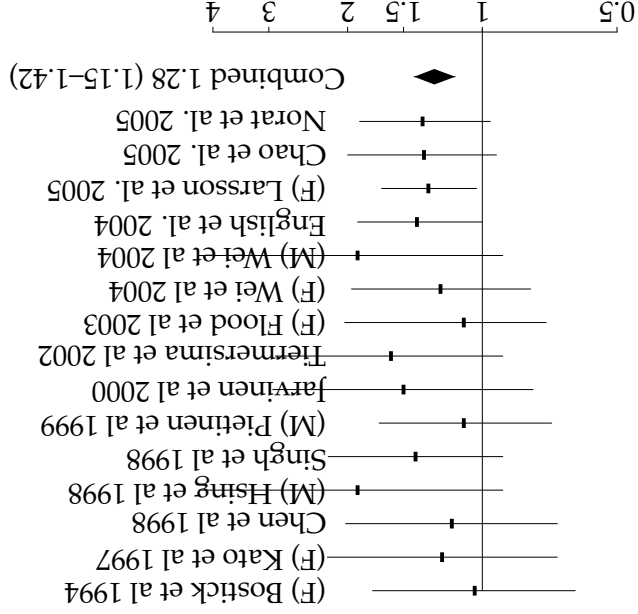
The scientists have found that it is the heme iron in red meat that causes the NOC formation[7]. The irony is that this iron is a major nutritional reason for eating red meat. Non-heme iron in plants doesn't lead to NOC formation. The remaining links in the chain from red meat to cancer have been demonstrated recently in humans[8] — red meat leads to NOCs which produce DNA damaging compounds. These in turn produce DNA damage like that found in bowel cancer tissue. Both the NOCs and cells with precisely the right (meaning dangerous) DNA damage are increased in the faeces of people eating red meat.

For decades, the tobacco industry denied that tobacco caused lung cancer. Researchers slowly dotted every "i" and crossed every "t" until there was no doubt. That's exactly what has now happened with red meat. Tobacco companies used to buy doctors to tout their products, now the meat industry gives CSIRO research money and CSIRO promotes its cancer causing product. The parallels are striking.

Researching the body count

As with the tobacco companies of old, Meat and Livestock Australia target children with their advertising — telling them lies about red meat making our brains grow. It is clear that MLA aims to do its best to ensure Australia keeps its position as the bowel cancer capitol of the world.

There are now 3 meta-analyses[9, 10, 11] into the link between red and processed meat and bowel cancer. These meta-analyses combine the results of individual studies which compare rates of bowel cancer in people eating different levels of red and processed meat. For example, the latest meta-analysis[11] in 2006 combined results from 15 studies to calculate the increased risk of bowel cancer with red meat consumption. The fourth study from the bottom (English et al) in the following Figure is by the Victorian Cancer Council.



In each case the result of a study is represented above by a little box with a horizontal line running through it. If the little box is to the right of the vertical line marker "1", then the study found rates of cancer increased with red meat. If it is to the left, then red meat decreased cancer rates. All studies reported increased rates of bowel cancer with red meat consumption. The horizontal bars are the 95% confidence