



SAFE LIMIT

THE CASE FOR WARNING LABELS ON PROCESSED RED
MEAT AND A BAN ON SALES TO CHILDREN

**'There is convincing scientific evidence that eating
processed meat increases bowel cancer risk and this is
why WCRF recommends people avoid [it]'**

- World Cancer Research Fund



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FOREWORD



Colorectal cancer is depressingly common, with more than 40,000 new diagnoses in the UK alone every year. It is also the second biggest cancer killer, with only malignancy of the lung exacting a higher death toll. For a cure or prolonged survival, major surgery is essential, with around half of patients living for five years or more afterwards.

Despite its incidence, as an emergency doctor, it is rare for me to make a first diagnosis of colorectal cancer. I usually attend patients in whom the disease is advanced enough to manifest some of its deeply unpleasant complications. Frequently, this is when a large tumour has blocked the bowel, causing agonising abdominal pain and bloating.

Surgery for colorectal lesions is highly invasive and, with the opening of the gastrointestinal tract, carries major potential for bacterial contamination. As a result, we see wound infections, abscesses and septicaemia not infrequently in emergency settings. However, probably the most common reason for bowel cancer patients to need urgent, out-of-hours care is due to secondary cancers in the liver, brain or bones. These deposits cause significant suffering, as can the chemotherapy or radiotherapy employed to shrink them. These treatments send blood counts crashing and immunity plummeting.

I need no reminding, therefore, that bowel cancer is a big deal. It is curable if caught early, but as many sufferers are diagnosed in the late stages of illness as they are in the earliest, with most being diagnosed somewhere in between.

It is well known that habits (and physical health) established in childhood are often perpetuated into adulthood, by which time they are ingrained and harder to alter. This is why I find it so shocking, so profoundly unethical, that the meat industry appears determined to ensure that no meaningful steps are taken to rein in the consumption of its carcinogenic products.

The evidence presented in this report is conclusive – red meat, especially in its processed forms, is a potent cause of bowel cancer. It is accepted as such by almost every major health body in the world, including the NHS in the UK and the World Health Organization globally.

It is worth recalling that the massive Harvard study, published in 2012, followed 120,000 people over 28 years. It showed that people who consumed a serving (defined as 85g) of unprocessed red meat per day had a 10 per cent increased risk of dying from cancer, compared with people who ate very little or no red meat. For those who ate a daily helping of processed meat – for example, two slices of bacon or one hot dog – the risk of cancer death was elevated by 16 per cent. The researchers estimated that 9.3 per cent of all deaths in men and 7.6 per cent in women could have been prevented if all the individuals in the study consumed less than 40g of red meat per day.

As is set out in this report, the parallels between the widely reviled attempts by tobacco companies to stall tighter controls on their products, and the tactics used by ‘Big Meat’, are uncanny. The stark truth is that vested interests must be perfectly aware that their output causes death and disease. Such behaviour is not novel, but that does not make it any less cynical. The industry will not rein itself in, and we must also consider whether governments are in hock to industry pleading, and whether they are likely to voluntarily engage in meaningful health promotion. Thus far, only feeble attempts to wean the public off even the most malign products have been made. This is not acceptable. The public must be told the facts: processed red meat kills. A health warning and an age-restriction on sales is the minimum we ask at this point.



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NO SAFE LIMIT

THE 'NO SAFE LIMIT' CAMPAIGN

There is no safe limit for the consumption of processed red meat, just as there is no safe limit for the smoking of tobacco. Both products are known to increase the risk of cancer and yet only one is subject to restriction and regulation. For the sake of public health, Animal Aid believes there should be a uniform policy relating to the sale of these carcinogenic products. That means:

- **Health warnings should be issued for processed red meat products at their point of sale**, either on the packaging itself or on the menu in restaurants and food outlets
- **There should be a ban on the sale of processed red meat products to people under the age of 18**

It is clear that processed red meat is damaging the health of the British public, as well as placing a significant burden on the NHS, and that much more needs to be done to educate the public about its dangers. Placing warning labels on all relevant food items is an essential first step. As well as offering consumers a more informed choice, it would bring these items in line with other carcinogenic products, such as cigarettes.

Adults are capable of making informed decisions about the risks they take relating to smoking, drinking or the food they eat. But children are often unable to grasp fully the implications of their actions.

We accept that some parents may still wish to serve their children processed red meat products at home, despite the risks, and we do not propose legislation to prevent that, in the same way that there is no legislation to prevent children from smoking in private. But we are calling for consistency in how carcinogenic products are marketed and sold.

WHAT IS PROCESSED RED MEAT?

Processed red meat refers to any kind of non-poultry meat (pork, lamb, beef, etc) that has gone through a process such as smoking, salting or curing. **Such products include, but are not limited to: bacon, ham, sausages, salami, pepperoni, bologna, pastrami and hot dogs.** These treatments were used to preserve the meat in times before the invention of refrigeration but, even though we no longer need to preserve meats in this way, the products are still widely consumed.



It is clear that processed red meat is damaging the health of the British public, as well as placing a significant burden on the NHS

It has long been established that processed red meat products are bad for human health. Their high saturated fat and salt content are well known to increase the risk of cardiovascular disease, obesity and stroke. For many years, doctors have advised patients with these conditions to reduce their intake of such products, or cut them out entirely. However, in more recent years increasing evidence has emerged that processed red meat also causes cancer, most notably colorectal or bowel cancer.

THE CANCER CONNECTION

The first scientific study to establish a clear link between the consumption of red meat and an increased risk of bowel cancer was published in 1990,¹ but was preceded by numerous anecdotal reports. Whilst this initial study did not differentiate between processed and unprocessed red meat, it prompted much further research and, since then, scientists have amassed a wealth of evidence linking the consumption of processed red meat with an increased risk of bowel cancer.

The numerous highly respected organisations to have conducted studies establishing a link between processed red meat and bowel cancer include:

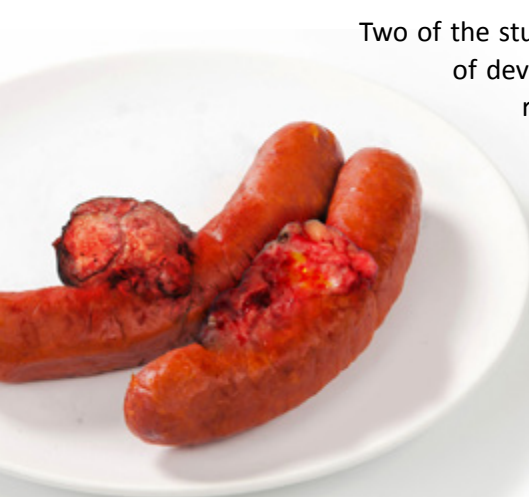
- National Institutes of Health (USA)²
- The American Cancer Society³
- The International Agency for Research on Cancer (part of the World Health Organization)⁴
- World Cancer Research Fund^{5,6}
- The Cancer Council Victoria (Australia)⁷
- Swiss Cancer Research Fund⁸
- Dutch Cancer Society⁹

The following organisations also established a link between processed red meat and cancer generally:

- National Cancer Institute (USA)¹⁰
- Harvard School of Public Health¹¹

These organisations — and the many others that have conducted studies — are highly regarded in the world of medical research. Their studies were also extensive in their scope. The investigation by the International Agency for Research on Cancer, for example, followed 478,000 people in ten European countries.¹² The American Cancer Society study examined the eating habits of 148,610 people across 21 states over 19 years.¹³

Despite these studies examining varied populations and using different methodologies, they came to the same conclusion: the consumption of processed red meat increases the risk of developing bowel cancer.



Two of the studies found that eating processed red meat can as much as double the chances of developing bowel cancer.^{14,15} Importantly, several of them also established a 'dose-response' relationship: **the more processed red meat eaten, the greater the risk of developing bowel cancer.** One report concluded that for every additional 25g of processed red meat consumed per day (equivalent to less than half a pork sausage), the risk of developing bowel cancer increased by 49 per cent.¹⁶ This not only suggests that there is no 'safe limit' of processed red meat consumption, but is also suggestive of a causal link between the products and the disease.

OFFICIAL RECOGNITION

The World Cancer Research Fund (WCRF) – a well-respected research charity committed to cancer prevention – has made it clear that it accepts there is a definite link between processed red meat and bowel cancer. In its 2007 report, *Food, Nutrition, Physical Activity, and the Prevention of Cancer: a Global Perspective*, the WCRF not only states that ‘the evidence that red meats and processed meats are a cause of colorectal cancer is convincing’, it recommends that processed red meat should be ‘avoided’ altogether.¹⁷ **By 2009, it was advising parents that they should not feed processed meat products to their children.**^{18,19}

Here in the UK, **the Department of Health acknowledges that a link between processed red meat and bowel cancer exists** and has advised that people should limit their daily intake to no more than 70g of processed and unprocessed red meat combined – equivalent to one sausage or two pieces of bacon.²⁰ Whilst this recommendation is weaker than that given by the WCRF, it at least acknowledges that there is a problem and is a concrete measure intended to reduce the deaths caused by bowel cancer.

The link between processed red meat and bowel cancer is also acknowledged by many in the world of cancer research and treatment. The organisations **Cancer Research UK, Bowel Cancer UK** and **Beating Bowel Cancer** have statements to this effect on their websites.^{21,22,23} Scientists investigating other causes of bowel cancer have also begun adjusting their results to account for the bias that red meat consumption will have on their figures.^{24,25,26}

A 2011 study found that approximately one fifth of bowel cancer cases in the UK in 2010 could be attributed to the consumption of processed and unprocessed red meat.²⁷

BOWEL AND LUNG CANCER

Bowel and lung cancer are both major public health issues around the world. According to the most recent figures, **bowel cancer is the third most common cancer in the UK** for both men and women, while lung cancer is the second most common cancer for both genders.²⁸

Lung cancer rates peaked in men in the late 1970s and have since been reducing, thanks to the decline in smoking.²⁹ However, bowel cancer incidence rates in men have increased by 29 per cent since 1975. In women, lung cancer rates increased by 45 per cent over the same period,³⁰ while bowel cancer incidence rates have also risen but more slowly.³¹

In 2010, around 42,000 people were diagnosed with lung cancer in the UK (with almost 34,900 people dying from the disease that same year)³² while 40,695 people were diagnosed with bowel cancer (with 15,708 deaths).³³

Only 54 per cent of people diagnosed with bowel cancer survive for five or more years.³⁴ For lung cancer, that figure is 10 per cent.³⁵

Bowel cancer costs the NHS in England £1.1bn per year³⁶ (with around one-fifth of cases thought to be due to eating processed red meats³⁷), while the cost of treating cancers caused by smoking is £0.6bn a year.³⁸ A 2011 report by Oxford University found that poor diet now costs the NHS more than cigarettes or alcohol.³⁹



BIG TOBACCO AND THE MEAT INDUSTRY — SMOKE AND MIRRORS

When the first scientific reports establishing a link between lung cancer and smoking were published in 1950^{40,41,42,43,44} the tobacco industry quickly started a campaign to undermine the research. This strategy intensified over the following decades, and cost the lives of an untold number of people who died from preventable respiratory diseases.

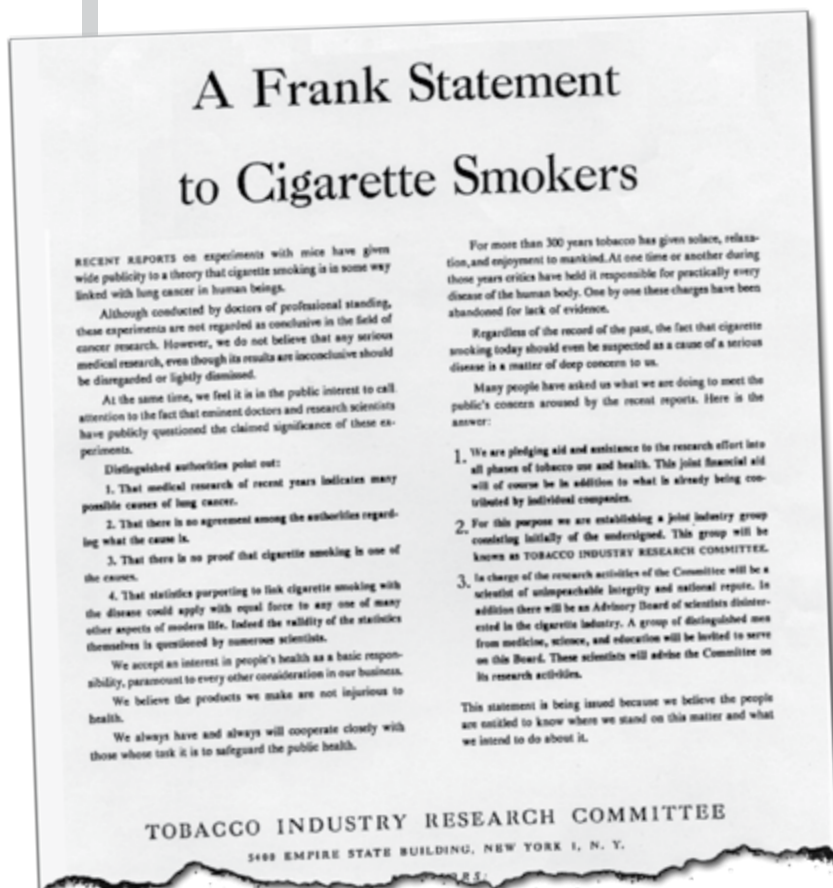
More recently, we have seen the start of the meat industry's campaign to mitigate the impact of the established link between processed red meat and bowel cancer, a campaign that mirrors the pro-smoking lobby's strategy. In this section we examine some of the methods employed to protect profits, even at the cost of human health, and we reveal the flaws in the arguments being put forward.

TACTIC 1 — CASTING DOUBT ON THE RESEARCH

TOBACCO INDUSTRY

Casting doubt on research was one of the first deflection tactics used by the tobacco industry. An early example is the 'Frank Statement to Cigarette Smokers',⁴⁵ an advert commissioned by several major companies and which appeared in newspapers and magazines across the USA on 4th January 1954. The 'Frank Statement' was a direct challenge to some of the first studies that found a link between smoking and lung cancer. It stated that 'there is no proof that cigarette smoking is one of the causes [of lung cancer]' and that 'statistics purporting to link cigarette smoking with the disease could apply with equal force to any one of many aspects of modern life'. Of course, it is now

firmly established that smoking causes lung cancer but even at the time the 'Frank Statement' was published the evidence was strong and growing.



The most damning evidence of the tobacco industry's attempts to cast doubt over the health impacts of smoking comes from within the industry itself. In a leaked 1972 internal memo from the US Tobacco Institute, Vice President Fred Panzer stated that 'for twenty years, this industry has employed a single strategy to defend itself... creating doubt about the health charge without actually denying it; advocating the public's right to smoke, without actually urging them to take up the practice; encouraging objective scientific research as the only way to resolve the question of health hazard'.⁴⁶

MEAT INDUSTRY

A principle method used to undermine the link between processed red meat and bowel cancer is to spread, via the media, doubt about the science behind it. One tactic is to set up an 'independent' group through which experts can voice their doubts. An example is the Meat Advisory Panel – a joint initiative by the British Pig Executive (BPEX), English Beef and Lamb Executive (EBLEX) and Meat Promotion Wales (Hybu Cig Cymru). Members of the Meat Advisory Panel are frequently quoted in the media speaking out against some of the cancer studies that connect the disease to meat.



One of its key independent spokespeople is nutritionist, Dr Carrie Ruxton. She spent five years with the Sugar Bureau, and has performed 'fee paid work' for companies including Bernard Matthews Farms and Coca Cola, as well as for the British Egg Industry Council, BPEX and EBLEX.⁴⁷

Following publication of the Harvard study in 2012⁴⁸ Dr Ruxton stated that '...the study was observational, not controlled, and so cannot be used to determine cause and effect'.⁴⁹ Whilst it is true that the research did not establish the exact mechanism by which processed red meat causes bowel cancer, this does not mean the study is invalid or inaccurate. For at least 150 years epidemiological studies like this have repeatedly established links between diseases and their causes, long before the exact mechanism is understood – smoking and lung cancer being a prime example.

Maureen Strong, a Nutrition Manager who also works for EBLEX and BPEX, is similarly critical. Of the 2007 WCRF report she said: 'As the evidence is based on prospective observational studies, confounding factors such as smoking or obesity may have influenced the findings.' This is in fact not true. It is good scientific practice to adjust figures to compensate for other risk factors and several of the studies examined in the WCRF report categorically state doing this, especially those that found bowel cancer and processed red meat to be linked.^{50,51,52,53}

TACTIC 2 – COUNTER-RESEARCH

TOBACCO INDUSTRY



In 1953, a number of tobacco companies paid for the creation of the Tobacco Industry Research Committee (TIRC) – later renamed the Council of Tobacco Research – on the advice of public relations company Hill & Knowlton, which initially ran the TIRC.⁵⁴ The TIRC's stated aim was to 'to aid and assist research into tobacco use and health',⁵⁵ but much of the research it funded sought causes of lung cancer that were unrelated to smoking, such as genetic and environmental factors.⁵⁶ This was aimed at undermining links to tobacco. The TIRC widely publicised the fact that it provided millions of dollars worth of funding to medical research to demonstrate a commitment to public health.

Sadly, such activities are not restricted to the 1950s. When research in 1992 found a link between second-hand smoke and Sudden Infant Death Syndrome (SIDS),⁵⁷ tobacco company Philip Morris commissioned two 'independent

reviews' of the findings. The second of these reviews, written by Frank Sullivan and Susan Barlow, initially concluded that there was indeed a link between second-hand smoke and SIDS. Scientific executives from Philip Morris 'encouraged' Sullivan to change his original conclusions⁵⁸ and when the report was published in 2001 it stated that whilst smoking during pregnancy had an impact on infants' health, the effects of postnatal second-hand smoke were 'less well established'.⁵⁹

MEAT INDUSTRY



Various interests within the meat industry have commissioned and funded research that aims to either disprove the link between processed red meat and bowel cancer or that demonstrates 'health benefits' of processed red meat products, while whitewashing the link to cancer. One clear example is the publication *Red Meat and Processed Meat Consumption and Cancer* funded by the National Cattlemen's Beef Association and The National Pork Board in the USA.⁶⁰ This report attempts to disprove links between red meat and cancer through a critique of the research. According to the WCRF, whose research was particularly singled out for criticism, the Cattlemen's document was not a comprehensive review of the available science, nor was it made available for peer review. Dubbing it more 'spin than science', the WCRF said: 'There is simply no comparison between the WCRF Expert Report – a systematic, transparent, peer-reviewed project that took five years to complete, involved independent teams of investigators across the globe, and was overseen by an international panel of leading experts on cancer and nutrition – and the NCBA's technical summary, which was prepared by a small team with little background in nutrition.'⁶¹

Another scientific study, which was widely reported in the press in 2010, claimed to have found that a high-fat breakfast of bacon, sausages and eggs was the healthiest start to the day.^{62,63,64,65} However, the study itself did not use any of these food items, but rather involved feeding mice a special high-fat mouse feed.⁶⁶ Another fact not mentioned in many of the news reports on the study was that it was partly funded by Kraft Foods,^{67,68} one of the largest manufacturers of processed red meat products in the USA.

TACTIC 3 – ACCENTUATE THE POSITIVES (JUST DON'T MENTION THE NEGATIVES)

TOBACCO INDUSTRY



In the 1930s, the tobacco industry, seeking to expand its market, targeted women through advertising. One message was that smoking would help women to remain slender.⁶⁹ This was a tactic that continued well into the 1950s with the Cornell Drug Corporation's 'Trim Reducing-Aid Cigarettes', long after it had emerged that cigarettes cause lung cancer.⁷⁰

We now know that nicotine activates certain neurons in the brain that signal that the body has had enough to eat, thereby suppressing the appetite.⁷¹ But in focusing on the positive benefit of smoking without stating that there are other ways to stay slim, and without mentioning the overwhelming negative effects that were starting to be known, the tobacco industry sought to mislead consumers.

MEAT INDUSTRY

The meat industry's promotional materials often focus on iron, as there is no doubt that there is plenty of this mineral in meat. In a 2011 *Meat Trades Journal* article on bowel cancer and processed red meat, Dr Ruxton issued a serious message aimed, again, at women: 'Because meat is one of the best sources of easily absorbed iron in the diet, UK women who cut down on red meat could be putting their health at risk.'⁷²

This stark warning neglects to mention that there are numerous other good sources of iron – such as pulses, nuts, green vegetables and dried fruits⁷³ – that do not come with the increased risk of bowel cancer associated with processed red meat.



TACTIC 4 – TARGETING MEDICAL PROFESSIONALS

TOBACCO INDUSTRY

As concerns about smoking-related health problems began to emerge in the 1930s and 1940s, many of the leading tobacco companies ran adverts in medical journals claiming that their brand was healthier than another in the hope that doctors would recommend them to their patients. Philip Morris was a leader in this strategy, commissioning adverts with headings such as 'For patients with irritation of the nose and throat' and 'In advising patients on smoking'.⁷⁴ Many tobacco companies also incorporated doctors and medical experts into adverts to promote a healthy image for smoking. Camel cigarettes adopted the slogan 'More doctors smoke Camels than any other cigarette' for a long-running campaign throughout the 1940s,⁷⁵ and Philip Morris even ran an advert claiming that 'Leading Nose and Throat Specialists Suggest... Change to Philip Morris!'⁷⁶



When news of the link between smoking and lung cancer began to emerge, many of these attempts to target doctors and incorporate them into promotional campaigns came to an end. Public relations company Hill & Knowlton advised that such associations were no longer viable and may even draw attention to the 'health scare'.⁷⁷ However, some manufacturers, such as the Lorillard Tobacco Company, continued to recruit doctors to promote their cigarettes

through adverts in medical journals right up until 1953. This was finally stopped when the *Journal of the American Medical Association* banned tobacco adverts in its publications.⁷⁸

MEAT INDUSTRY



"The Meat & Livestock Commission (MLC) is set to start targeting the medical profession on nutrition matters, in a bid to head off potentially damaging cancer claims."

It is clear that the meat industry is concerned about healthcare professionals advising people to cut down their processed red meat consumption on the basis of its link to bowel cancer. Ahead of the publication of the 2007 WCRF report, Richard Lowe, the director general of the Meat & Livestock Commission (MLC) addressed the 2007 British Meat Processors

Association conference on the issue. He stated: 'If the report is going to do long term damage, it will come from doctors and healthcare professionals as it will impact through the advice they give to their patients.'⁷⁹ However, a subsequent article in the *Meat Trades Journal* made it clear that the

MLC planned to take proactive steps in preventing doctors from advising people to stop eating cancer-causing meat products, stating: 'The Meat & Livestock Commission (MLC) is set to start targeting the medical profession on nutrition matters, in a bid to head off potentially damaging cancer claims.'⁸⁰

OTHER TACTICS

Other tactics that have been used by both industries to minimise the impact of links to cancer include:

- **Marketing to children**, who do not appreciate the risks and may form life-long consumer habits – including the use of cartoon characters such as Joe Camel⁸¹ and the Flintstones⁸² in the case of the tobacco industry and Ronald McDonald and the Peperami 'animal' character in the case of the meat industry.
- **Corporate social responsibility schemes** to whitewash health risks and improve public image – such as the Fresh Produce Initiative to provide food banks with the facility to store and distribute fresh fruit and vegetables. During the 1990s this scheme was sponsored by both Philip Morris tobacco company and Kraft Foods, one of the largest manufacturers of processed red meat products.⁸³
- **Funding 'astroturf' groups** (fake grassroots organisations that give the illusion of popular support) – The Centre for Consumer Freedom, originally established with funding from Philip Morris,⁸⁴ is just such an organisation and has run campaigns against calls to ban smoking in restaurants. It has also received funding from the meat industry, including Tyson Foods Inc.,⁸⁵ and regularly criticises those who raise health risks associated with meat and processed red meat products.⁸⁶
- **Denigrating opponents** rather than addressing legitimate concerns – examples include tobacco industry funded group 'Forest' referring to anti-smoking campaigners as 'health fascists',⁸⁷ whilst The Centre for Consumer Freedom has publicly referred to vegetarian campaigners as 'anti-meat zealots' and 'food radicals'.⁸⁸

It took several decades to get a full picture of the public relations strategy used by the tobacco industry to put profits ahead of public health. A similar picture is beginning to emerge for the meat industry – and is even being reported in the media⁸⁹ – but it may take some time before we appreciate the full scale of the enterprise, or the full impact on human health and mortality.

It is clear, however, that the meat industry is concerned by the evidence linking processed red meat to bowel cancer and what this will mean for its profits. A 2011 article in *Meat Science* articulated this point:

'If these recommendations [to avoid processed red meat] were adhered to, cancer incidence may be reduced, but farmers and [the] meat industry would suffer important economical problems.'⁹⁰

CONCLUSION

The fact that processed red meat is linked to an increased risk of bowel cancer has been firmly established by numerous scientists; it has been acknowledged by leading health and cancer charities; and even the British government accepts the link. But to date, there have been no measures taken to properly educate the public and to dissuade them from consuming these products. This is despite the rising annual death toll. Urgent action is required to reverse the trend, in line with steps taken to combat lung cancer.⁹¹

Like the tobacco industry, the meat industry cannot be relied upon to address this issue itself. Various industry elements are already seeking to attack and undermine efforts even to raise awareness of the problem. The government must, therefore, act.

Legislation is needed to warn people at the point of sale of the hazards of eating processed red meat and to ensure that children, who may not appreciate the risks, are protected from the carcinogenic properties of these foodstuffs.

Animal Aid believes these demands are both reasonable and proportionate. The World Cancer Research Fund has already advised parents not to give processed red meat products to their children⁹² and, in the USA, the Physicians Committee for Responsible Medicine (PCRM) has called for processed meat products to carry health warning labels.⁹³ PCRM has also brought a lawsuit against several manufacturers of processed meat products on behalf of plaintiffs who had purchased hotdogs without knowing they caused cancer. Such legal cases may become more common in future as a result of the absence of health warning labels to alert the public.

There is no safe limit for the consumption of processed red meat. So, for the sake of public health, these carcinogenic products should be restricted, in line with that other prime cancer-causing agent, tobacco.

Written and researched by Ben Martin

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ISBN 978-1-905327-35-5