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Smoking and ulcerative colitis

SIR,—Dr Richard F A Logan and others believe that smoking is directly or indirectly protective against ulcerative colitis (10 March, p 751). If this were true one might expect a significant excess of lifelong non-smokers in the patient group when compared to controls. Their figures show that this is not the case. As they concede in their discussion, the association between non-smoking and disease was mostly accounted for by smokers who had given up the habit before developing the disease.

Calculated from their table II, the percentage of ex-smokers at the time of onset of disease, including those who had given up in the past three months (55% men, 24% women), was greater than the corresponding numbers in the control groups (16% men, 12% women) ($\chi = 26{\cdot}5$; $p < 0{\cdot}001$, if matching is ignored). The mean time from stopping smoking to the onset of disease (8·5 years) would be shortened by the addition of these ex-smokers, and we are not told about the skewness of distribution or control values.

Far from demonstrating a protective effect of smoking, the act of stopping smoking seems to carry the risk of ulcerative colitis—a risk that lifelong non-smokers are not exposed to.

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SIR,—Dr Richard F A Logan and others are incorrect in concluding that smoking confers protection against ulcerative colitis—rather the opposite is true (10 March, p 751).

Using their own data and cross tabulating patients and controls against those who have never smoked and the remainder who (by definition) must have smoked at some time shows no association. A similar comparison, however, of ex-smokers and current smokers shows a very strong association (table). As these ex-smokers had given up their habit before the onset of the disease it cannot be said that the disease necessitated abstinence but rather the opposite. In other words, ex-smokers have a much higher relative risk of contracting the disease than either non-smokers or those who continue to smoke. Clearly this evidence suggests that smoking brings about unknown but permanent changes which possibly relate to gut mucosa and that the effects of these changes are suppressed while smoking continues. Giving up the habit then brings on the disease. In this sense smoking is not protective, rather it is causative in much the same way as many drugs are known to suppress their own unwanted effects —for example, psychoactive drugs and tardive dyskinesia.

Association between ulcerative colitis and smoking habit

Smoking habit	Men		Women	
	Patients	Controls	Patients	Controls
Never smoked	14	18	38	58
Others	42	70	26	55
χ^2	0·4091		1·066	
p	0·477		0·698	
Ex-smokers	32	26	19	18
Current smokers	10	44	7	37
χ^2	16·029		11·58	
p	< 0·001		< 0·001	

It would be interesting to see if cigarette substitutes such as nicotine chewing gum suppress the disease in ex-smokers. It would also be interesting to subdivide ex-smokers with the disease into the number of smoking years and then to compare the subgroups with controls to look for an association which may increase as the number of years smoked increases. One must, however, be careful not to "torture the data until they confess" as the saying goes.

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*** Dr Logan and Professor Langman reply below.—ED, *BMJ*.

SIR,—Dr Kennedy and Dr Amery make an interesting point in suggesting that it is stopping smoking that predisposes to ulcerative colitis rather than smoking protecting. It is an interpretation that we had considered, and by further analysis of our and other available data it is possible to examine these two propositions.

If we compare ex-smokers and smokers with those who have never smoked then we can compile a table showing the relative risk of ulcerative colitis for individuals in each of these three categories, using those who have never smoked as the standard.

Relative risk of developing ulcerative colitis among those who have never smoked, current smokers, and ex-smokers

	Cases	Controls	Relative risk of developing ulcerative colitis (95% confidence limits)
Harries *et al*[1]			
Never smoked	110	83	1·0
Ex-smokers	102	46	1·67 (1·07, 2·62)
Current smokers	18	101	0·13 (0·08, 0·23)
Jick and Walker[2]			
Never smoked	126	335	1·0
Ex-smokers	50	115	1·16 (0·78, 1·71)
Current smokers	63	506	0·33 (0·24, 0·46)
Logan *et al*[3]			
Never smoked	52	76	1·0
Ex-smokers (at onset)	46	24	2·8 (1·54, 5·1)
Current smokers (at onset)	22	99†	0·32 (0·18, 0·57)
All studies*			
Never smoked			1·0
Ex-smokers			1·84 (1·44, 2·35)
Current smokers			0·25 (0·20, 0·32)

*Adjusted risks using Mantel-Haenszel pooled estimates.
†In two controls smoking state at onset was uncertain.

It shows that in each of the three sets of data the chances of having colitis are increased in ex-smokers and much decreased in current smokers. In none of the three studies do confidence limits overlap unity where smokers are concerned, and we can therefore be confident that smoking, as we have said, protects directly or indirectly against colitis.

When data for ex-smokers are examined two of the sets of confidence limits overlap unity, and we can therefore be less sure that ex-smokers are particularly liable to develop the disease. Also the slightly increased risk found in ex-smokers in the studies of Harries *et al*[1] and of Jick and Walker[2] may be plausibly accounted for by the subjects stopping smoking as a consequence of developing ulcerative colitis.

Ours is the first study to suggest an increased risk for ex-smokers when smoking habit at or just before disease onset is considered. It must be borne in mind that we had no prior hypothesis to link the giving up of smoking with the development of colitis, and it will need further studies to show whether this unexpected finding, which is difficult to explain is correct.

We are grateful to Professor J M Elwood for suggesting this further analysis.

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Are too many patients with mental handicap being discharged from hospital?

SIR,—Like Dr J Newcombe (7 April, p 1083) I am a consultant in mental handicap. Unlike him I have been in post as a consultant for five years compared to his 30.

He states, "We are steadily returning to the dark ages of psychiatry when people with psychiatric conditions were found in the workhouse, underneath arches, or in prison." Firstly, many mentally handicapped people in hospital do not have psychiatric conditions. They simply have an intelligence quotient of somewhere below 70-75. Secondly, many of the hospitals they have to live in are workhouses. They were built as workhouses, and in those that were not the conditions are sometimes no better than in the workhouse. For the mentally handicapped in hospital the dark ages are with us now. The attempts (though in some cases, as he quotes, misguided) to discharge these people into the community to experience an