

# Travel and health: illness associated with winter package holidays

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**SUMMARY.** A survey of 263 people who had winter package holidays abroad revealed that 21 per cent of the travellers had been ill. Forty-eight per cent of those who had been unwell reported an alimentary upset and 26 per cent reported respiratory symptoms. Illness was recorded most frequently by travellers to countries in the Mediterranean region.

More readily available advice or information would be useful in reducing the amount of illness associated with package holidays.

## Introduction

THE past two decades have seen remarkable changes in the number and destinations of holidaymakers. Before this time, the annual holiday was taken mainly in the United Kingdom. The development of the package holiday industry during the 1960s and 1970s in countries such as Spain, Italy and other areas around the Mediterranean resulted in a rapid increase in the number of people taking their holiday in places with warm sunny climates.

The modern ease of travel is not without its hazards. A survey carried out during the summer and autumn of 1977 among travellers returning to this country revealed that 43 per cent had suffered from an illness at some time during their trip.<sup>1</sup>

People travel abroad mainly during the summer months. Package holidays, however, are available throughout the year. This survey, which was carried out among holidaymakers returning to Scotland during the latter half of January 1980, attempted to gauge the frequency and type of illness experienced by people taking a winter package holiday and to compare their illness rates with those travelling in the summer.

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## Method

Questionnaires issued by the Environmental Health staff of Renfrew District Council invited the passengers to provide information on age, sex, smoking habit, country visited, hotel, and any illness experienced during their holiday or shortly after their return to this country. For ease of reply, a prepaid envelope was enclosed, addressed to the Communicable Diseases (Scotland) Unit.

Those who replied and gave a history of illness were invited to volunteer a 5 ml sample of venous blood. This blood was subsequently collected by the method described by Cossar and colleagues<sup>2</sup> and examined for serological evidence of legionnaires' disease, as described by Fallon and Abraham,<sup>3</sup> at the Department of Laboratory Medicine, Ruchill Hospital.

## Results

Questionnaires were returned by 263 tourists—115 (44 per cent) males and 148 (56 per cent) females (Table 1). Overall, 54 tourists (21 per cent) reported illness. A total of 942 questionnaires were distributed (Table 2).

**Table 1.** Distribution of tourists by sex and reports of illness. (Percentages in parentheses.)

	Well	Unwell	Total
Male	87 (76)	28 (24)	115 (44)
Female	122 (82)	26 (18)	148 (56)
Total	209 (79)	54 (21)	263 (100)

**Table 2.** Response rate and passenger arrivals at Glasgow airport for the study period 21-31 January 1980. (Percentages in parentheses.)

Returned completed questionnaires	Total number distributed	Passenger arrivals, non-schedule flights
263 (28)	942 (100)	8,311*

\*Estimated figure from Statistics and Landings Department, Glasgow Airport (BAA).

**Table 3.** Distribution of tourists by country visited and reports of illness. (Percentages in parentheses.)

	Well	Unwell	Total
USSR	44 (88)	6 (12)	50 (19)
Austria	35 (80)	9 (20)	44 (17)
Malta	45 (79)	12 (21)	57 (22)
Tunisia	30 (68)	14 (32)	44 (17)
Majorca	34 (87)	5 (13)	39 (15)
Tenerife	21 (72)	8 (28)	29 (11)
Total	209 (79)	54 (21)	263 (100)

Table 3 shows that 94 tourists (35 per cent) visited cold countries—the USSR and Austria. The warmer destinations were largely in or near the Mediterranean. Reports of illness ranged from 12 per cent of those visiting the USSR to 32 per cent of those visiting Tunisia.

The distribution of tourists by country visited and reports of illness is shown in Table 4. The figures recorded per country show prominence of reports of alimentary illness except for Malta, which showed a preponderance of respiratory complaints, and Tunisia (36 per cent of illnesses with respiratory features).

The distribution of tourists by age group indicated that 24 (9 per cent) were less than 20 years old, with

other age groups fairly evenly represented (Table 5). Reports of illness ranged from 6 per cent in the over 60 years age group (3/49) to 33 per cent in the 21–30 years age group (17/51) and 32 per cent in the 31–40 years age group (12/37). These latter two groups accounted for 54 per cent (29/54) of the total reports of illness.

Sixty-seven tourists (25 per cent) stated that they smoked, 55 (82 per cent) of whom remained well (Table 6). Of the 12 smokers who reported illness, six had an alimentary upset, two a respiratory complaint, two both alimentary and respiratory problems, and two had other vague disorders. Ten of these tourists provided a serum sample, all of which proved negative in tests for evidence of contact with *Legionella pneumophila*. No statistically significant difference was noted between the type of illness reported by smokers and non-smokers.

Factors to which the tourists attributed their illness are shown in Table 7. Drink was blamed in 23 (43 per cent) reports of illness.

### Discussion

In 1977 11.5 million UK residents visited abroad; by 1980 this number had risen to 17.5 million, an increase of 52 per cent (international passenger survey conducted by OPCS and the Department of Trade). This surge in numbers was accompanied by a wide geographic expansion of the countries visited and the development of a

**Table 4.** Distribution of tourists by country visited and type of illness. (Percentages in parentheses.)

	Alimentary	Respiratory	Alimentary and respiratory	Other	No illness	Total
USSR	4	1	0	1	44	50
Austria	3	1	3	2	35	44
Malta	5	6	0	1	45	57
Tunisia	6	4	1	3	30	44
Majorca	4	1	0	0	34	39
Tenerife	4	1	0	3	21	29
Total	26 (10)	14 (5)	4 (2)	10 (4)	209 (79)	263 (100)

**Table 5.** Distribution of tourists by age group and type of illness. (Percentages in parentheses.)

Age group (years)	Alimentary	Respiratory	Alimentary and respiratory	Other	No illness	Total
<10	1	1	0	0	5 (71)	7 (3)
10–20	2	1	1	0	13 (76)	17 (6)
21–30	6	5	1	5	34 (67)	51 (19)
31–40	7	2	1	2	25 (68)	37 (14)
41–50	3	2	1	2	29 (78)	37 (14)
51–60	4	1	0	1	40 (87)	46 (17)
60+	2	1	0	0	46 (94)	49 (19)
Not known	1	1	0	0	17 (89)	19 (7)
Total	26	14	4	10	209 (79)	263 (100)

**Table 6.** Distribution of tourists by smoking habit and reports of illness. (Percentages in parentheses.)

	Well	Unwell	Total
Smoker	55 (82)	12 (18)	67 (25)
Non-smoker	154 (79)	42 (21)	196 (75)

**Table 7.** Distribution of tourists according to factors to which they attributed their illness. (Percentages in parentheses.)

Factor	Number of tourists
Food	5 (9)
Food and excessive sunbathing	2 (4)
Food and drink	11 (20)
Drink	12 (22)
Excessive sunbathing	4 (7)
Exercise problems	2 (4)
Other	8 (15)
Not known	10 (19)
Total	54 (100)

virtual 'all year round' package holiday industry. Earlier investigations have shown that holidays abroad are associated with unexpectedly high rates of illness,<sup>4</sup> with exposure to less common infectious agents<sup>2</sup> (for example, legionellosis) and with higher rates of illness in those travelling further south.<sup>1</sup> In an endeavour to continue monitoring this situation, package holiday-makers were questioned in January 1980 about their health experience so that comparative analyses with previous data could be attempted.

The return rate of 28 per cent, while disappointing, probably reflects the unpopularity of the topic of illness among holidaymakers. A number of those who reported illness included casual comments on their questionnaire, which suggests that they may have felt a greater obligation to complete and return the form than those who remained well. This altruism towards fellow holiday-makers does not seem unnatural. The return rate from the summer holidaymakers<sup>1</sup> is not known but as the distribution of the standard questionnaire was the same in method, location and target population there seems no reason to suspect that the percentage of non-returned would be significantly different. The questionnaire was also used in a study of summer tourists to Scotland in 1980, when a return rate of 23 per cent was recorded.<sup>5</sup>

The enquiry represented 3 per cent of the non-scheduled passenger arrivals at Glasgow Airport during the study period. Overall, 21 per cent of those who returned questionnaires had been ill at some time during their winter holiday abroad compared with 45 per cent of summer package holidaymakers surveyed in 1977<sup>1</sup> and 19 per cent of summer tourists to Scotland in 1980.<sup>5</sup> Alimentary symptoms were reported by 10 per cent of

the winter travellers and respiratory symptoms by a further 5 per cent. Among the summer package holiday-makers previously studied, 32 per cent reported alimentary symptoms and 3 per cent respiratory symptoms, while summer visitors to Scotland reported similar proportions (5 per cent) of alimentary, respiratory and other symptoms. Holidaymakers in the age group 21–30 years had the highest illness rate in both winter (33 per cent) and summer (55 per cent) package tours whereas summer visitors to Scotland reported the highest illness rate (24 per cent) in the 30–39 years age group.

In this study, smoking did not emerge as a risk factor in relation to holiday illness. This correlates with the experience of summer tourists to Scotland, but contrasts with the experience of a self-selected group of tourists returning from abroad in whom smoking and being over 60 years of age emerged as risk factors.<sup>2</sup>

The percentage of tourists reporting illness increased the further south and hotter the country visited, Austria being the only apparent exception to this pattern. This resembled the experience of the summer package holidaymakers. In both studies those visiting Tunisia seemed to fare less well, recording the highest attack rates. The winter package holidaymakers were forthcoming in attributing the influential factor in their ill-health, 22 per cent implicating drink as opposed to food, which the summer package holidaymakers blamed more frequently (37 per cent).

In conclusion, a package holiday abroad taken in the winter months seems to carry less risk of holiday illness than a comparable summer package holiday but slightly more risk than a summer holiday in Scotland. This may be due to a number of variants, among which are perhaps the differing lifestyles of those undertaking a winter holiday, the climate or other factors. In common with summer package holidays abroad, the risk of illness appears greater the further south one travels, with alimentary illness the predominant hazard and the 21–30 years age group at most risk. This may reflect a more adventurous outlook adopted by the latter group, especially in relation to eating and drinking habits while abroad, or perhaps a relative inexperience of holidays abroad.

The problems of illness associated with travel have recently been accorded increased professional recognition by the introduction of the term *emporiatrics* (Greek *emporos*, one who goes on board ship as a passenger, plus *iatrike*, medicine).<sup>6</sup> The information in this paper may be of help in formulating medical advice given by the general practitioner as to where and when a patient should travel abroad, particularly if there is a pre-existing health problem. Patients with a tendency to gastrointestinal illness, such as peptic ulceration, irritable bowel syndrome, diverticulitis or ulcerative colitis, contemplating a holiday abroad should be made aware of the apparent advantage of a winter holiday to a more northerly country with cooler weather in minimizing the risks of a gastrointestinal upset. This awareness may

also be advantageous to the frail elderly who cannot tolerate a prolonged episode of gastrointestinal upset. For holidaymakers in these groups there may be justification for prescribing an antidiarrhoeal for use abroad at an early stage if required.

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## Deaths from accidents and violence

The numbers of deaths assigned to accidental and violent causes and registered in the June quarter 1982 (4,736) was almost the same as the equivalent quarter of 1980 (4,730). Within these figures there was a reduction in deaths from accidents in the home (-100). There were increases in deaths from suicides (+34 persons; +69 males, -35 females), homicides (+20, an increase

which may be an artefact of catching up with accelerated registration forms) and open verdicts (+52). The numbers of deaths from transport accidents and accidents outside the home remained at a similar level.

In the September quarter 1982 the total number of accidental and violent deaths (4,423) was lower than for the equivalent quarter in 1980 (4,611). There were decreases in deaths from transport accidents (-107), accidents in the home (-86), suicides (-86 persons; -5 males, -81 females), and open verdicts (-8). There were increases in accidental deaths outside the home (+84), and homicides (+27).

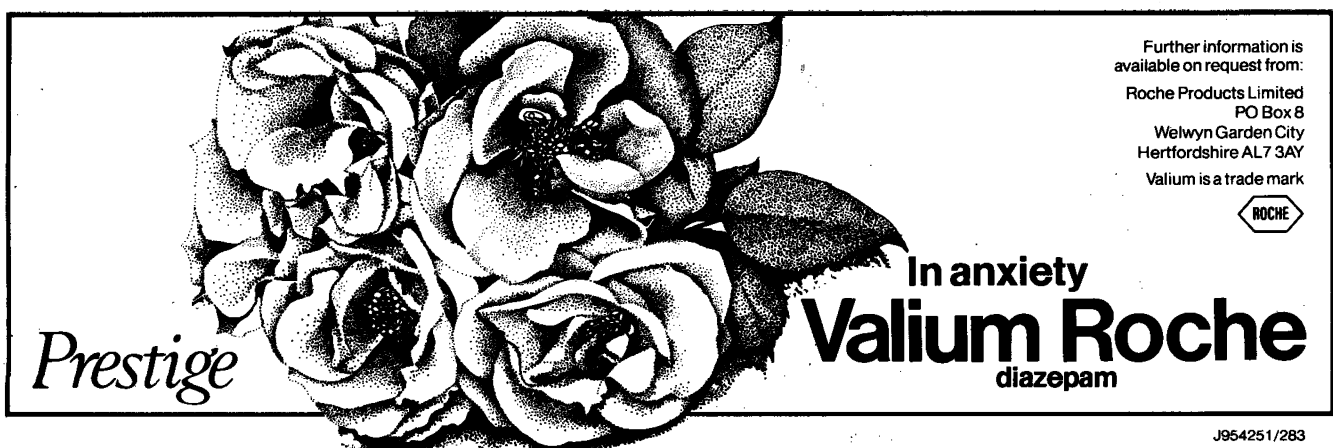
Source: *OPCS Monitor* 1983; DH4 83/1. June 1983.

## Prevalence of cigarette smoking

General Household Survey figures show that 38 per cent of men and 33 per cent of women were cigarette smokers in 1982, indicating a substantial fall in prevalence (that is, the proportion of adults who smoke cigarettes) from 1980 levels among men and women. Among men this decline continued the trend evident throughout the previous decade. In 1972, 52 per cent of men aged 16 years and over smoked cigarettes. By 1980 this had fallen to 42 per cent, and the further fall to 38 per cent in 1982 meant that during the period covered by the survey, prevalence among men had fallen by about a quarter. Among women, however, the decline in prevalence from 37 per cent in 1980 to 33 per cent in 1982 was the first major reduction since 1976. Over the decade as a whole the prevalence of cigarette smoking among women fell by about one fifth.

The overall fall in prevalence between 1972 and 1982 reflected a fall in the proportions of both men and women who were light smokers (fewer than 20 cigarettes a day). The proportion of men who were heavy smokers (20 or more cigarettes a day) also fell between 1974 and 1982, but the proportion of women who were heavy smokers was the same in 1982 as it had been in 1972.

Source: *OPCS Monitor* 1983; GHS 83/3. 5 July.



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