## FIRST SESSION

# "THE SAIR BACK"

**Dr Annis Gillie,** *O.B.E.,* (*Chairman, President of the College of General Practitioners*)

**Dr Arthur F. Nelson,** M.B., Ch.B. (*Chairman of the West of Scotland Faculty Board*)

I MAKE no apology for using the Scottish colloquialism, "The Sair Back". Apart from emphasizing that the symposium is being held in Scotland, this use of the vernacular indicates that the subject to be discussed is primarily a condition of men working physically hard for their living. I warn those who come from the south that the use of the vernacular is widespread in this area not only among the labouring classes but also among the well-educated, who employ it when they want to emphasize a particular point.

## THE SIZE OF THE PROBLEM

**Dr James Watson,** M.D., M.B., Ch.B. (*Provost of the faculty and regional medical officer of the Scottish Home and Health Department*)

I translate the title into lumbago or a sore back; it does not include upper backache, such as that caused by cervical conditions.

In my own particular title, 'The Size of the Problem', the use of the definite article is not to be taken literally because I cannot give you an accurate size, though I can indicate that it is considerable. My statistics were gathered from the Regional Medical Office in Glasgow, so the tables will not include: (1) cases which do not report to their practitioner although they have a sore back; (2) cases which attend the general practitioner but are not off work; in a series of 117 cases investigated by Wilson and Wilson,[1] 52 per cent had never reported sick and 50 per cent had lost no time; (3) short cases, such as acute backaches which respond to treatment within 3—4 weeks; (4) cases outwith the ages 16—65 for men or 16—60

women, or any which do not obtain sickness or injury benefit when incapacitated.

There are some 21 million insured people in Great Britain, from whom about 9 million claims for sickness benefit are received. Between 280 and 290 million weekdays are lost through sickness. To this total has to be added about 20 million lost through injury. In the United Kingdom from 13 per cent (1964) to 19 per cent (1962) of all reported accidents affect the spine and trunk.[2]

Table I shows the spells of incapacity in Great Britain from 3 June 1963 to 30 May 1964, analysed according to the International Statistical Classification of Diseases, Injuries and Causes of Death issued by the World Health Organization in 1957.

TABLE I

SPELLS OF INCAPACITY IN GREAT BRITAIN FROM 3 JUNE 1963 TO 30 MAY 1964

| *Causes of incapacity* | *Sickness benefit* | | *Injury benefit* | |
|---|---|---|---|---|
| | *Men* | *Women* | *Men* | *Women* |
| (A) All causes .. .. | 6,652,800 | 2,334,360 | 792,660 | 88,180 |
| (B) 363.0: Sciatica .. .. | 45,720 | 7,080 | 60 | — |
| 726.0: Lumbago .. | 127,300 | 17,700 | 80 | — |
| 787.5: Pain in back .. | 44,700 | 11,500 | 460 | 140 |
| Sprains and strains of joints and adjacent muscles: | | | | |
| N 846: Sacro-iliac region | 11,300 | 4,000 | 3,140 | 400 |
| N 847: Other and unspecified parts of back .. | 113,700 | 15,000 | 86,920 | 4,920 |
| TOTAL (B) .. .. .. | 342,720 | 55,280 | 90,660 | 5,460 |
| Per cent (B) of (A) .. .. | *5.1* | *2.4* | *11.4* | *6.2* |

During this period there were 6,652,800 spells of incapacity from all causes among men drawing sickness benefit, of which 342,720, or 5.1 per cent were from back disabilities. Among women the corresponding figures were 2,334,360 incapacities from all causes, of which 55,280 or 2.4 per cent were from back disabilities. Of those drawing injury benefit 11.4 per cent of the men had back incapacities from a total of 792,660, against 6.2 per cent of the women from a total of 88,180.

In the present investigation three and latterly four regional medical officers and three part-time medical referees took part; 500 cases were examined without selection over a period of nearly five months.

All R.M.2As or doctors' reports on patients that are returned in

time are scrutinized by an R.M.O. before it is decided to call the patients. Over a period, three R.M.O.s scrutinized 4,118 cases of all types, of which 545 or 13.2 per cent had a back disability as the practitioner's diagnosis. In Scotland in one quarter, 32,732 cases of all types were referred. From these two facts one can assume that about 4,332 cases of back disability were referred in one quarter. This I would consider shows already that there is a problem of some size.

Table II shows the occupations of the men under consideration. There were so many individual occupations that after mentioning the three from which most of the men were drawn the rest have been divided into heavy, medium and light occupations. As one would expect labouring occupations have the highest incidence, followed by miners of all types and then heavy vehicle drivers. Dr W. C. Roantree of the National Coal Board made an interesting study[3] of some of the weights miners have to deal with in their hazardous and difficult occupation—e.g., steel props weigh from 60 to 129 lb., girders from 250 to 350 lb., etc. As he says, " It is to be expected that the incidence of back injuries will be high in mining." Miners' lifts are not only heavy, but often in awkward circumstances. In 1962, in four collieries in Kent, the 5,232 employees had 2,140 accidents, of which 18.5 per cent involved backs. Dr Roantree also suggests that most of the cases occurred while lifting.

TABLE II

OCCUPATIONS (MALE)

| | |
|---|---|
| Labourers (various) .. .. .. .. .. .. | 136 |
| Miners .. .. .. .. .. .. .. | 70 |
| Drivers (heavy) .. .. .. .. .. .. | 34 |
| Other heavy occupations .. .. .. .. .. | 57 |
| Medium occupations .. .. .. .. .. | 52 |
| Light occupations .. .. .. .. .. .. | 32 |
| TOTAL .. .. .. .. .. .. .. | 381 |

Walford[4] found that miners and quarry workers head the list for a diagnosis of lumbago, with more than twice the incidence for other workers. As one goes down the social scale so the incidence increases, presumably in association with increased manual work.[4 5] He also noted that transport workers had a particularly heavy incidence. This is confirmed by the figures in the present survey (table II). It was suggested that research should be instituted into the design of driving seats. But of course many transport workers have heavy " off and on load " lifts.

Female occupations are given in greater detail (table III). Domes-

tic work—i.e., domestic workers plus housewives—tops the list, with factory workers not far behind. This might suggest that our wives are the heaviest female manual workers.

TABLE III

OCCUPATIONS (FEMALE)

| | |
|---|---|
| Domestic | 26 } 45 |
| Housewife | 19 } |
| Factory worker | 31 |
| Shop assistant | 13 |
| Nurse | 5 |
| Office workers | 6 |
| Bus conductress | 3 |
| Dressmaker, presser, packer, hairdresser (2 each) | 8 |
| Bakery worker, animal technician, waitress, receptionist, dispenser, printer's helper, brickworker, rag sorter (1 each) | 8 |
| TOTAL | 119 |

Table IV shows the examiners' diagnoses in 500 cases. Some inaccuracies may well have occurred. For greater accuracy, x-rays and other investigations would have been required. But it should be remembered that in some cases there was access to hospital reports and that seven different examiners took part. Therefore, the personal element at least in diagnosis should be eliminated. It should be noted that only seven of the 500 cases were labelled as frank malingerers. Indeed, Dr Blair will not admit such a diagnosis.

Of the 500 cases, the examiners considered neurosis, which included anxiety state, functional overlay, hysteria and depression, etc. to be the incapacitating cause in 58 or 11.6 per cent. The 11.6 per cent compares with the ten per cent that Rutter[6] found in his cases. This diagnosis does not mean that neurosis was the only disability. Often it was combined with some genuine back trouble. But the examiner in these cases considered that the back trouble was no longer the main cause of incapacity and that the neurosis was the reason for continuing off work. In addition, 145 cases had an associated neurosis or a history of neurosis, making a percentage of 29 per cent, which is close to the 30 per cent of the Working Party of the College of General Practitioners[7] in 1958. When one confines this selection to long-term cases it is found that 55 out of 134 cases were so afflicted, making a percentage of 41 (table V).

In table VI the present findings are compared with Dr Rutter's figures in his Upjohn Paper[6] and Dr Stanton's figures.[8]

In four men and seven women the examiners could find no

demonstrable lesion. There are practically three times as many males as females in the survey, and this great preponderance of females agrees with the experience of Blair[9] and Knox.[10]

The young age of the females is interesting—three were under 20, three were 30 or under, and one was 36. The men were also youthful

TABLE IV

DIAGNOSES

| *Diagnosis* | *Male* | *Female* | *Total* |
|---|---|---|---|
| Back strain .. .. .. .. | 102 | 18 | 120 |
| Degenerative changes .. .. .. | 91 | 18 | 109 |
| Disc lesion .. .. .. .. | 53 | 13 | 66 |
| Neurosis .. .. .. .. .. | 39 | 19 | 58 |
| Bruising .. .. .. .. .. | 30 | 14 | 44 |
| Sacro-iliac strain .. .. .. | 28 | 9 | 37 |
| Fibrositis .. .. .. .. | 8 | 4 | 12 |
| N.A.D. .. .. .. .. .. | 4 | 7 | 11 |
| Spinal fracture .. .. .. .. | 10 | — | 10 |
| Malingering .. .. .. .. | 7 | — | 7 |
| Gynaecological .. .. .. .. | — | 5 | 5 |
| Coccydynia .. .. .. .. | — | 4 | 4 |
| Lumbo-sacral strain .. .. .. | 1 | 2 | 3 |
| Whiplash injury of spine .. .. | 3 | — | 3 |
| Osteochondritis .. .. .. .. | 1 | 1 | 2 |
| Tuberculosis of spine .. .. .. | 1 | 1 | 2 |
| Spondylolisthesis .. .. .. | 1 | 1 | 2 |
| Compression of vertebra .. .. | 1 | — | 1 |
| Pregnancy.. .. .. .. .. | — | 1 | 1 |
| Other .. .. .. .. .. | 1 | 2 | 3 |
| TOTAL .. .. .. .. | 381 | 119 | 500 |

TABLE V

INCIDENCE OF ASSOCIATED NEUROSES

| | *Male* | *Female* | *Total* | *Total Long term cases* | *Total Cases with neurosis* |
|---|---|---|---|---|---|
| Long-term cases without neurosis .. .. .. | 60 | 19 | 79 | 134 | |
| Long-term cases with neurosis .. .. .. | 36 | 19 | 55 | | 145 |
| Short-term cases with neurosis .. .. .. | 62 | 28 | 90 | | |
| TOTAL .. .. | 158 | 66 | 224 | | |

—one of 18, one of 20, one of 32 and one of 33. In one it was thought the complaint of sore back was made to obtain a holiday. In two of the women the complaint came on after confinement. One woman was five months pregnant. Of the total of 11 cases, eight had had no previous history of being off work with back trouble. Of the seven cases, all males, thought to be malingering, four had had frequent back incapacities before and all, apart from one of 52 years, were in the younger age-group.

Speaking about diagnosis, it is noteworthy that in 1961, of the 4,654 cases declared incapable of work by the R.M.O., in only 5.6 per cent did the R.M.O. disagree with the general practitioners' diagnosis[5].

TABLE VI

MAIN DIAGNOSES IN PRESENT SERIES AND IN THOSE OF DR RUTTER AND DR STANTON

| *Diagnosis* | *R.M.O.* | *Rutter* | *Stanton* |
|---|---|---|---|
| Degenerative changes .. | 109 | 16 | 53 |
| Back strain .. .. .. | 120 | — | — |
| Disc lesion .. .. .. | 66 | 82 | 64 |
| Neurosis .. .. .. | 58 | 12 | 1 |
| Bruising .. .. .. | 44 | — | — |
| Gynaecological .. .. | 5 | 2 | — |
| Lumbo-sacral strain .. .. | 3 | — | 48 |
| Sacro-iliac strain .. .. | 37 | — | 25 |
| Others .. .. .. | 58 | 14 | 24 |
| TOTAL .. .. .. | 500 | 126 | 215 |

The age and sex of the cases examined are shown in table VII. It will be noted that the ratio of females to males was approximately 1 to 3. The age-grouping as a whole was as one would expect, the main incidence not taking place until the late twenties or thereafter. Only two cases are noted in the women of 55 and over, but it must be remembered that the insurable age for women ceases at 60 whereas for men it continues to 65. The age-grouping agrees in essence with the 215 cases seen by Stanton[8] at an orthopaedic clinic over a period of six months.

According to the morbidity statistics published by the College,[4] in the year ended 2 June 1962, the number of days incapacity due to sciatica or displaced disc was 192. Table VIII does not show the total period of incapacity but only the period up to time of call up, but it at least shows that many cases can be very chronic and long-term. Of the 135 cases which had been off work for longer than six months at the time of examination, 57 had been off for longer than

a year and three had been off for ten years.

Table IX shows that as age increases the period of incapacity tends to be longer. This trend applies to all diseases and was found to be four times as high in the oldest group as the youngest.[4 5] An attempt was made to relate age to period off work. As there were only two cases in the under-18 group these were excluded and also the only two females in the over-56 group. In calculating these averages any case incapacitated for more than a year was taken as 52 weeks to prevent undue influence on the figures by cases of exceptional long-term incapacity—e.g., ten years, etc.

TABLE VII

AGE AND SEX DISTRIBUTION IN PRESENT SERIES AND IN DR STANTON'S SERIES

| *Age (years)* | *Male* | *Female* | *Total* | *Stanton* | |
|---|---|---|---|---|---|
| | | | | *Age (years)* | *No.* |
| –18 | 1 | 1 | 2 | –20 | 7 |
| 19–25 | 26 | 23 | 49 | 20–30 | 38 |
| 26–35 | 97 | 28 | 125 | 30–40 | 53 |
| 36–45 | 99 | 31 | 130 | 40–50 | 56 |
| 46–55 | 88 | 34 | 122 | 50–60 | 41 |
| 56– | 70 | 2 | 72 | 60– | 22 |
| TOTAL | 381 | 119 | 500 | TOTAL | 217 |

TABLE VIII

DURATION OF INCAPACITY OF CASES UNDER REVIEW BY SEX

| *Weeks of incapacity* | *Male* | *Female* | *Total* |
|---|---|---|---|
| – 4 | 35 | 1 | 36 |
| 5– 8 | 99 | 42 | 141 |
| 9–13 | 73 | 15 | 88 |
| 14–26 | 77 | 23 | 100 |
| 27–52 | 61 | 17 | 78 |
| over 52 | 36 | 21 | 57 |
| TOTAL | 381 | 119 | 500 |

TABLE IX

DAYS OF INCAPACITY IN CASES OF SCIATICA AND DISPLACED DISC AT VARIOUS AGES

| *All ages* | *–24* | *25–34* | *35–44* | *45–54* | *55–59* | *60–63* |
|---|---|---|---|---|---|---|
| 192 | 32 | 117 | 234 | 269 | 318 | 283 |

Table X once again confirms that the average period of incapacity rises with age. The other factor brought out is that females tend to have a longer incapacity than males of corresponding age. But again it should be remembered that the figures quoted are taken from the time of call up and do not show the total time of incapacity.

Two women and one man had been off work for ten years. The man was a plumber's mate of 61 suffering from arthritis of the spine. One woman was a spinster of 56, an unemployed shop assistant, who had had a disc lesion but was considered to be suffering from involutional depression. The other woman was a housewife of 36 in whom the examining officer could find no abnormality. Her doctor described the backache as an ' old steady ' and thought she had no intention of trying to work.

TABLE X

AVERAGE PERIOD OFF WORK IN WEEKS

| *Age (years)* | *Weeks off work* | |
|---|---|---|
| | *Male* | *Female* |
| 19–25 | 13.5 | 17 |
| 26–35 | 17 | 21.5 |
| 36–45 | 19.5 | 24.5 |
| 46–55 | 22 | 24 |
| 56– | 22 | — |

Table XI shows the average age and average period off work related to diagnosis. As regards age, the only significant point is that patients suffering from degenerative change are on average ten years older than the other categories. Disc lesions seem to cause the longest incapacity, with degenerative changes a close second. As would be expected, direct injury or bruising has the shortest incapacity period.

TABLE XI

DIAGNOSIS RELATED TO AGE AND PERIOD OFF WORK

| *Diagnosis* | *Average age (years)* | *Period off work (weeks)* |
|---|---|---|
| Degenerative changes | 48½ | 29 |
| Back strain | 37½ | 13 |
| Disc lesion | 38½ | 31 |
| Bruising | 38½ | 11 |
| Sacro-iliac strain | 40½ | 13 |

Another fallacy which appears to be widespread is that many working men have ' compensationitis '. In the present series, only five per cent of the men and 13 per cent of the women admitted to be claiming or have claimed compensation. Distinction should be drawn here between claiming damages, as in the above cases, and receiving injury benefit (table XII).

TABLE XII
COMPENSATION

| *Compensation* | *Male* | *Female* | *Total* |
|---|---|---|---|
| Yes .. .. | 57 | 15 | 72 |
| No .. .. | 324 | 104 | 428 |
| TOTAL .. | 381 | 119 | 500 |

Again backache is a disability which gets the reputation of giving rise to repeated incapacities. The present figures did not corroborate this. In 142 men and 77 women there was no previous history of incapacity, and 92 men and 18 women had a history of only one previous attack. Women had a better history in this respect than men. Only 14 women had more than three previous attacks, compared with 96 men (table XIII).

TABLE XIII
PREVIOUS SPELLS OFF WORK

| *No. of spells* | *Male* | *Female* | *Total* |
|---|---|---|---|
| Nil .. .. | 142 | 77 | 219 |
| 1 .. .. | 92 | 18 | 110 |
| 2 .. .. | 40 | 5 | 45 |
| 3 .. .. | 11 | 5 | 16 |
| More .. | 96 | 14 | 110 |
| TOTAL .. | 381 | 119 | 500 |

The number of male and female cases giving a history of injury is shown in table XIV. These figures may be influenced by the fact that patients with a sore back are inclined to try to find an injury to which they may attribute their disability.

According to Troup,[11] " only a small proportion of low back disorders can properly be attributed to accidents, although heavy manual work is clearly a major contributing factor "—and indeed may be a factor in causing degenerative changes in the spine. However, the figures are interesting in that the emphasis is on injury in men but only approximately 50:50 in women. To illustrate how easy it is to find a possible traumatic cause if one is looked for, I

quote the remarks of one examiner on a form: " Possibly strained back at home 9½ years ago helping to deliver wife of a child—obstetric shock ".

TABLE XIV
HISTORY OF INJURY

| *History present* | *Male* | *Female* | *Total* |
|---|---|---|---|
| Yes .. .. | 272 | 60 | 332 |
| No .. .. | 109 | 59 | 168 |
| TOTAL .. | 381 | 119 | 500 |

## Summary

The size of the problem has not been defined, but there is no doubt about its considerable magnitude, not only for the social services of the country, but also in particular for the general practitioner who has to deal with the cases in the first instance and throughout their incapacity.

In such an important disability, I was interested to find how few references could be supplied by libraries with which a study of this type could be compared. The Nuffield Library of the B.M.A. gave nine, of which at least three were not suitable and two were not in the library. The College library gave 12, one or two of which again were not suitable. (For a thesis in a tuberculous subject which I did many years ago 109 references were brought to notice!)

**Acknowledgements**

For helping in preparing this paper I wish to thank Dr Blair, Dr Fulton and Dr Scobie, part-time medical referees, and Dr Logan and Dr Morrison, regional medical officers, all members or associates of the College.

BIBLIOGRAPHY

1. Wilson, R. M., Wilson, S. (1964) *Practitioner*, **192**, 657.
2. Annual Report of H.M. Chief Inspector of Factories, 1964. London: H.M.S.O.
3. Roantree, W. B. (1963). *Medical Officers Broadsheet*, **4**, 1–8.
4. College of General Practitioners (1962). *Morbidity Statistics from General Practice*, vol. III (Disease in General Practice).
5. Report on an enquiry into the incidence of incapacity for work (1965). Part II, London: H.M.S.O.
6. Rutter, D. L. D. (1964). The evaluation and management of backache in general practice, Upjohn Essay.
7. College of General Practitioners Research Committee (1958). *Brit. med. J.*, **2**, 585.
8. Stanton, G. A. (1963). *Practitioner*, **190**, 517.
9. Blair, W. (1963). *J. Coll. gen. Practit.*, 355.
10. Knox, J. D. G. (1963). The frustrations of a common problem and an attempt to measure it.
11. Troup, J. D. G. (1965). *Lancet*, **1**, 857.