

**THE HEALTH AND HABITS OF
HIGHER EXECUTIVES**

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PART 2

Findings

In the first part of this paper we discussed the routine examination of 250 higher executives in industry. We described the rationale and the methods we employed. In the first examination we found no complaint of ill-health in only 23 of the 250 examined. We described in detail the *aide-mémoire* that we have designed for the examination.

We now give more detailed information on the findings of this investigation.

Some basic facts about the patients

As has already been mentioned, the patients fell into two groups: Group A (150 subjects) were directors and senior employees of a large building and civil engineering firm, operating widely in Britain and throughout the world with its head office in London; Group B (100 subjects) were the directors and senior employees of 26 firms with only this in common, that their places of employment were located in a new town. Group B covered light and medium engineering, electronics, chemical engineering, woodworking, cardboard-box and glass-bottle making, and miscellaneous firms. The two groups differed only slightly in age on first examination (table I).

It will be seen that the senior builders and civil engineers (Group A) were slightly younger than their colleagues in other industry (Group B).

The status at work of the persons in each group was subdivided under six heads (table II).

TABLE I
AGE ON FIRST EXAMINATION

	A		B		Total	
	No.	Per cent	No.	Per cent	No.	Per cent
Under 25	—	—	—	—	—	—
25-34	29	19	12	12	41	16
35-44	64	42	40	40	104	42
45-54	38	26	30	30	68	27
55-64	18	12	17	17	35	14
64+	1	1	1	1	2	1

TABLE II
STATUS AT WORK

	A		B		Total	
	No.	Per cent	No.	Per cent	No.	Per cent
Higher direction ..	20	13	36	36	56	22
Supervising—from office	17	11	21	21	38	15
Supervising—on site or factory floor ..	30	20	3	3	33	14
Specialist	73	49	28	28	101	40
Accounts	7	5	6	6	13	6
Sales	3	2	6	6	9	3

The larger number in 'higher direction' and in 'sales' in the general industrial group reflects the multiplicity of firms. The large number in the 'specialist' category in the building and civil engineering firm is mainly due to the great volume of estimating and quantity surveying work which such a firm has to undertake. The difference in the figures for 'supervisors on site or factory floor' reflects the importance which attaches to site work in contracting and the relatively low position of the factory-floor supervisor in British industry.

In previous employment patterns, the two groups were also somewhat different (table III).

A lower proportion of builders and civil engineers had always been employed by their present firm; a higher proportion of those in general industry had been employed by five or more firms.

Twenty of those in general industry had been with their present

firm for 21 years or more, as compared with eight in the building and civil engineering group.

TABLE III
PATTERN OF PREVIOUS EMPLOYMENT

	A		B		Total	
	No.	Per cent	No.	Per cent	No.	Per cent
Always with present firm	6	5	14	14	20	9
Mainly or always with one firm previously	32	27	23	23	56	26
With 2-5 firms previously	66	57	43	43	108	50
With 5+ firms previously	13	11	20	20	33	15

Relevance of past medical history

The relevance of the past medical history depends on the degree of residual disability arising from the past diseases or accidents. Residual disability for this purpose includes liability to recurrence.

All residual disabilities were carefully assessed and separated into two groups, 'slight' and 'substantial', depending on whether or not common medical prudence suggested that the patient should be under medical observation.

It was thought that residence in the tropics might be a substantial source of residual disability. As might be expected, a much higher proportion of the civil engineers and builders had worked in the tropics or subtropics (table IV).

TABLE IV
RESIDENCE IN TROPICS OR SUBTROPICS

	A		B		Total	
	No.	Per cent	No.	Per cent	No.	Per cent
Not in tropics	49	33	59	59	108	43
On work	54	36	13	13	67	27
In Services (including P.O.W.)	24	16	25	25	49	19
In both	17	11	2	2	19	8
Born or brought up in tropics	6	4	1	1	7	3

In both groups, the commonest period of work in the tropics was one to five years (31 per cent in Group A, 10 per cent in Group B).

Of the 142 who had resided in the tropics, 72 had had some tropical illnesses (22 had had more than one such illness). Only four had

slight residual disability and two had substantial disability. Other causes of residual disability are shown in table V.

TABLE V
CAUSES OF RESIDUAL DISABILITY

250 patients	<i>Slight</i>		<i>Substantial</i>	
	<i>No.</i>	<i>Per cent</i>	<i>No.</i>	<i>Per cent</i>
Past major illnesses	30	12	6	2
Past accidents (including war wounds) ..	32	13	6	2
Past operations	14	6	5	2

These residual disabilities arose out of 156 major illnesses, 138 accidents and 107 operations (excluding Ts and As). The 150 builders and civil engineers had 23 accidents arising out of sport, as compared with six in the 100 in general industry.

Pressure of work and happiness at work

At each initial examination, an assessment of the pressure of work into three categories—full, excessive and ‘not enough’—was made, and the patient’s reaction to this was noted, by recording whether or not he showed signs of strain (table VI).

TABLE VI
PRESSURE OF WORK AND REACTION TO THIS

	<i>A</i>		<i>B</i>		<i>Total</i>	
	<i>No.</i>	<i>Per cent</i>	<i>No.</i>	<i>Per cent</i>	<i>No.</i>	<i>Per cent</i>
‘Not enough to do’—						
Reaction satisfactory	13	8	8	8	21	8
Strain	2	2	1	1	3	2
‘Work keeps subject fully extended’						
Reaction satisfactory	110	73	64	64	174	69
Strain	18	12	26	26	44	18
‘Excessive amount of work’						
Reaction satisfactory	6	4	—	—	6	2
Strain	1	1	1	1	2	1

‘Not enough’ work was a more common complaint than too much. The great majority were fully extended by their work, but one-fifth showed some evidence of strain.

Of the total 250, 56 were described as working ‘excessive hours’, and 16 were described as working ‘very excessive hours’. The latter group worked at week-ends as well as taking work home

regularly. When those who showed strain were analysed according to 'status at work', it was found that two groups showed high figures. Of those responsible for 'higher direction', 20 (36 per cent) out of 56 showed evidence of strain; of those responsible for 'sales', three (33 per cent) out of nine showed evidence of strain. It will be seen from the table that the figure for strain for the whole group was 49 (20 per cent) out of 250.

The great majority (over 90 per cent) described themselves as happy at their work and had no complaints in this respect. Here there was no difference between the two groups. Nine out of 250 attributed their unhappiness to difficulties in personal relations and ten to technical or purely business problems.

At subsequent examinations (638), family causes of anxiety were recorded. In eight per cent, ill-health of the wife was causing some degree of anxiety, in three per cent there was overt marital stress, and in 0.5 per cent there was overt stress arising over the children.

Educational background

The school background of the two groups is shown in table VII.

TABLE VII
TYPE OF SCHOOL ATTENDED

	A		B		Total	
	No.	Per cent	No.	Per cent	No.	Per cent
Secondary modern ..	43	31	30	30	73	31
Grammar	70	51	51	51	121	51
Public	25	18	19	19	44	18

The pattern in both groups is identical, with half attending grammar schools and about a third secondary modern schools.

As would be expected, a corresponding pattern emerges when the age of leaving school is examined (table VIII).

TABLE VIII
AGE AT LEAVING SCHOOL

	A		B		Total	
	No.	Per cent	No.	Per cent	No.	Per cent
14-15	38	27	33	33	71	30
16-18	101	73	67	67	168	70

By contrast, the post-school educational pattern shows definite differences between the two groups (table IX).

Among the builders and civil engineers a slightly lower proportion served an apprenticeship, a higher proportion went to Oxbridge, and a substantially higher proportion were articled. In both groups, some apprentices also attended technical colleges and night schools.

TABLE IX
FURTHER EDUCATION

	A		B		Total	
	No.	Per cent	No.	Per cent	No.	Per cent
Apprenticeship ..	37	28	35	35	72	30
Technical college—day or night ..	37	28	32	32	69	29
Business—not articled	6	4	2	2	8	4
Business or professional—articled ..	22	17	4	4	26	11
University—Redbrick ..	20	15	24	24	44	19
University—Oxbridge	11	8	5	5	16	7

Of those with university degrees, about two-thirds had been at grammar schools and one-third at public schools. Four per cent had been at secondary modern schools only and had taken their degrees externally.

The road to the top

Education related to subsequent achievement

It seemed worth while to relate status at work to educational background. This was done by studying the education of the 56 persons classified as occupying positions of 'higher direction' in industry (table X—data available for 44 subjects).

TABLE X
TYPE OF SCHOOL ATTENDED BY THOSE RESPONSIBLE FOR 'HIGHER DIRECTION'

Comparing table X with table VII it will be seen that there is little difference; the grammar school boys had a slight advantage over those who went to other schools.

44 persons	Total	
	No.	Per cent
Secondary modern	12	28
Grammar	25	56
Public	7	16

A similar analysis for further education again shows how closely 'higher direction' conforms with the general pattern (table XI).

A comparison with table IX shows that in industry it is clearly no

disadvantage not to have attended a university, or to have trained only by apprenticeship and technical college.

TABLE XI
FURTHER EDUCATION OF THOSE RESPONSIBLE FOR HIGHER DIRECTION

	Total	
	No.	Per cent
Apprenticeship	16	30
Technical college—day or night	16	30
Business—not articulated	2	3
Business or profession—articled	6	11
University—Redbrick	10	19
University—Oxbridge	4	7

Work record related to subsequent achievement

Similar analyses were made relating the duration of employment with the present firm and the pattern of previous employment to the achievement of positions of higher direction (table XII).

TABLE XII
DURATION OF EMPLOYMENT WITH PRESENT FIRM

	Group as a whole		Those responsible for higher direction	
	No.	Per cent	No.	Per cent
Under 1 year	27	13	3	6
1–2 years	39	18	7	14
3–10 years	84	40	16	32
11–20 years	39	18	13	26
21 years or more	24	11	11	22
PREVIOUS EMPLOYMENT AND HIGHER DIRECTION				
Always with present firm	20	9	6	12
Mainly or always with one firm previously ..	56	26	15	31
With 2–5 firms previously	108	50	22	45
With 5+ firms previously	33	15	6	12

Nearly half of the 'higher direction' group have been with their present firm for 11 years or more (as compared with 29 per cent of the group as a whole); and nearly a quarter have been there for 21 years or more (as compared with 11 per cent for the group as a whole).

Forty-three per cent of the higher direction group had worked always or mainly with one or two firms, as compared with 35 per cent of the group as a whole. It is clear that capacity to 'stick it out' with one or two firms for a large number of years substantially increases one's chances on the road to the top. Nevertheless, there are many exceptions to this general rule.

Personality related to subsequent achievement

Response to pressure of work. Of 56 engaged in higher direction, 49 (88 per cent) were working at full pressure, as compared with 162 (84 per cent) for the rest of the group.

Of those in higher direction, however, 20 (36 per cent) were considered by the doctor to be showing some evidence of strain, as compared with 24 (12 per cent) in the rest of the group.

Hypochondriasis. Mental evaluation was attempted only in the 150 subjects in Group A. In this group, there were 20 subjects engaged in higher direction. Eight of these (40 per cent) showed evidence of hypochondriasis on first examination, as compared with 24 (19 per cent) in the rest of group A.

The only other subgroup to show a higher than average rate of hypochondriasis were the specialists, with a figure of 19 (26 per cent).

Success and personality type. A highly experienced chief personnel officer rated 120 subjects in Group A on a five-point scale. Each subject was personally known to him, and each was rated for his achievement against the background of the opportunities provided by his job (table XIII).

Mental evaluation was applied separately to those 'above average' and 'outstanding' (63) and to those who were 'average' and 'below average' (57). In the 'above average' group, 37 (59 per cent) showed obsessional features, as compared with 22 (40 per cent) in the rest. In the 'above average' group, 18 (29 per cent) showed schizoid features, as compared with seven (12 per cent) in the rest. There were no other outstanding differences.

TABLE XIII
ACHIEVEMENT WITHIN OCCUPATION

	No.	Per cent
Outstanding ..	3	2
Above average ..	60	50
Average ..	48	40
Below average ..	9	8
Poor ..	—	—

Second and subsequent examinations

As explained above, Group A patients were examined annually and Group B patients every two years. In practice, because of

clinical indications or because patients were abroad, timing in neither group was precise (table XIV).

TABLE XIV
TIME BETWEEN EXAMINATIONS

	<i>A</i>	<i>B</i>	<i>Total</i>
Less than 9 months	21	1	22
9-15 months	370	6	376
16-20 months	106	4	110
21-27 months	21	81	102
More than 27 months	10	19	29
Total	528	111	639

It will be seen that there were in fact 639 'repeat' examinations.

The results for Groups A and B are only given separately where there are obvious differences.

The 'executive year'

For certain items, it proved desirable to combine the findings in all examinations. These items were in the main those which applied to the 'notional year' of the patient's life preceding the examination. This 'notional year' ranged from nine to more than 27 months. For convenience, the data in respect of all 889 examinations are referred to in terms of 'executive years' (table XV).

The journey to work—an example. The differing pattern of the journey to work in Groups A and B illustrates the value, in studying behaviour, of the concept of the 'executive year' (table XV).

TABLE XV
JOURNEY TO WORK

	<i>A</i>		<i>B</i>		<i>Total</i>	
	<i>No.</i>	<i>Per cent</i>	<i>No.</i>	<i>Per cent</i>	<i>No.</i>	<i>Per cent</i>
Train or tube	127	22	4	2	131	17
Car—drives himself	365	64	183	97	548	72
Car—is driven	30	5	—	—	30	4
Bus	13	2	—	—	13	2
Train or tube, and car	9	2	1	1	10	2
Train or tube, and bus	26	5	—	—	26	3
Total	570		188		758	

Information was not available or was irrelevant (e.g. a man on short home leave from the tropics) in 131 instances.

The different pattern of the journey to work between the firm in London and the firms in the new town is at once apparent.

In Group A there were 527 repeat examinations and in Group B, 111. Thus the 30 chauffeur-driven 'executive years' in Group A referred only to five individuals.

General health indications

Fit or unfit

At the end of each examination, a short final medical summary of the patient's present condition was made. If there were any positive abnormal findings—symptoms or physical signs—the subject was classified as 'unfit', the remainder being regarded as 'fit'. Faulty behaviour, for example excessive smoking, was not in itself regarded as evidence of unfitness. Excessive weight, on the other hand, would put the subject into the 'unfit' group. Minor physical abnormalities, for example slight symptomless varicose veins, were disregarded.

TABLE XVI
FINAL MEDICAL DIAGNOSIS—FIT OR UNFIT

	<i>Fit</i>		<i>Unfit</i>	
	<i>No.</i>	<i>Per cent</i>	<i>No.</i>	<i>Per cent</i>
Group A examined approx. yearly ..	306	44	371	56
Group B examined approx. every 2 years	142	67	70	33
Total	448	51	441	49

It will be seen that, in Group B, a higher percentage were classed as fit than in Group A (table XVI).

TABLE XVII
ADVICE GIVEN TO PATIENT

	<i>No action</i>		<i>Personal action only</i>		<i>Referral</i>	
	<i>No.</i>	<i>Per cent</i>	<i>No.</i>	<i>Per cent</i>	<i>No.</i>	<i>Per cent</i>
Group A (677) ..	361	53	237	35	79	12
Group B (212) ..	92	43	48	26	72	31
Total (889)	453	51	285	32	151	17

There were two other indications of general fitness or unfitness: the advice given to the patient, including referral, and the doctor's

own note on points to be watched by him. It will be seen that, in Group A, no action was advised in a number of those who were classed as unfit. The reason was that no action was indicated, either medically or socially. By contrast, in Group B, personal action was recommended in a number who were classed as fit. The explanation of this is to be found in the referral rates. These were much higher in Group B, owing to a large number of dental referrals. Minor degrees of dental ill-health requiring treatment were not considered in assessing fitness or unfitness. The points to be watched by the doctor included weight, smoking habits, blood pressure, and other abnormal symptoms or physical findings (table XVIII).

TABLE XVIII
POINTS TO BE WATCHED BY DOCTOR

	<i>Nil</i>		<i>One or more present</i>	
	<i>No.</i>	<i>Per cent</i>	<i>No.</i>	<i>Per cent</i>
Group A (677)	302	44	375	56
Group B (212)	101	48	111	52
Total (889)	403	45	486	55

As a generalization, it can be said that half the examinations revealed a full degree of fitness, that in those not fully fit rather less than a quarter required further medical treatment or advice (excluding dental advice or treatment) and three-quarters required and received personal advice only.

The referrals

Table IV (in part 1, page 168) showed the proportion of patients referred to general practitioners, specialists or elsewhere at first and at subsequent examinations. Whereas the referrals to specialists were constant at eight per cent on first and subsequent examinations, referrals to general practitioners dropped from six per cent to three per cent, and referrals elsewhere from 11 per cent to three per cent.

A detailed analysis of the referrals to specialists gives an indication of the types of abnormality discovered at the examinations (table XIX).

On 17 occasions a patient was referred to more than one person. Sixty-four of the referrals took place after the first examination. At subsequent examinations, the numbers fell rapidly—36 after second examinations, 14 after third examinations, ten after fourth examinations and three after fifth examinations. Most referrals classified as 'other' were dental.

The advice given

A summary of the advice given at 889 examinations is shown in table XX. Multiple advice was given on 141 occasions and no action was advised on 453 occasions.

TABLE XIX
REFERRALS RESULTING FROM
889 EXAMINATIONS

Own general practitioner ..	32
General physician or cardiologist	21
General surgeon	2
Dermatologist	4
ENT surgeon	4
Radiologist	7
Pathologist or haematologist	4
Psychiatrist	3
Ophthalmologist or optician	15
Physiotherapist	8
Other	51
Total	151

TABLE XX
ADVICE GIVEN TO PATIENTS

Reduce weight	167
Reduce or stop smoking ..	105
Reduce drinking	17
Cut journey to work	1
Alter journey to work	6
Take more exercise	18
Alter work behaviour	40
To come again in less than usual time	37
Specific reassurance	33
Other	138

Data are available as to whether or not advice given was followed in respect of 440 items of advice, out of 562. In more than half the cases (63 per cent), the advice given was followed.

Habits and behaviour

Appetite, meals and weight

On initial examination, there were 60 per cent with an ‘average’ or medium appetite, 22 per cent of ‘heartly eaters’ and 18 per cent who described themselves as small eaters . . . ‘peckers at things’. Fifty-three per cent had two cooked meals per day, 33 per cent three cooked meals, and 12 per cent one cooked meal. The cooked meal most frequently omitted was breakfast, with the mid-day meal next. The usual substitute for the latter was sandwiches with beer or coffee. ‘Luxury’ business lunches were taken regularly by 13.6 per cent. Only four per cent had two or more such meals per week.

Weight was related to height and build using the tables of the Metropolitan Life Assurance Company of New York. The results of 248 initial examinations are given in table XXI.

Clearly obesity is a major problem in this group.

Despite some individual successes, efforts by the doctors to get their patients to reduce often failed (table XXII). As a rule, success

was only achieved when it was possible to generate a lively anxiety in the subject, for example because of raised blood-pressure or rejection by a life-insurance company.

TABLE XXI
WEIGHT IN RELATION TO HEIGHT AND BUILD

	<i>No.</i>	<i>Per cent</i>
Below two stone under normal limits	3	1
One to two stone under normal limits	14	6
Up to one stone under normal limits	32	13
Within normal limits	46	18
Up to one stone over normal limits	45	18
One to two stone over normal limits	62	26
Above two stone over normal limits	46	18

Exercise

In the 250 initial examinations, the doctors formed the opinion that in 194 patients, the amount of exercise taken was adequate. The nature of the exercise taken is given in table XXIII. Some took more than one form of exercise, so the total exceeds 100.

TABLE XXII
WEIGHT CHANGES ON RE-EXAMINATION

	<i>No.</i>	<i>Per cent</i>
Steady (\pm 3 lbs.) ..	252	47
Up	168	32
Down	105	21

Among the 56 patients who took inadequate exercise were a number who were chair-bound and who motored or were driven to or from work, some of whom took virtually no exercise at all. A train journey to work, with a walk at either end appeared to be no bad corrective for the physical sluggishness of office life. The adequacy or inadequacy of the amount of exercise (in the doctor's opinion) was related to fitness or unfitness (table XXIV).

TABLE XXIII
EXERCISE TAKEN

	<i>No.</i>	<i>Per cent</i>
In garden	128	51
Games, sports, etc.	87	35
At work	82	33
Walking—on way to or from work, and at lunchtime ..	47	19
Home repairs and decorating	13	5

Those who took inadequate exercise were urged to improve their

performance. The results of this urging are shown in table XXV.

TABLE XXIV
EXERCISE AND FITNESS

Exercise	Per cent	
	Fit	Unfit
Adequate—in doctor's opinion	53	47
Inadequate—in doctor's opinion	39	61

TABLE XXV
CHANGES IN EXERCISE PATTERNS

	No.	Per cent
Inadequate on initial examination ..	250	23
Inadequate on subsequent examinations	634	13

It is not unreasonable to attribute this improvement to the doctor's advice. The extra exercise was taken mainly in the garden, and by walking. As many gave up games with the advance of years as took them up again. Almost always, the older man's game was golf, though there were a few older devotees of tennis and swimming.

Alcohol

The pattern of consumption of alcohol recorded at 251 initial examinations is given in table XXVI.

TABLE XXVI
PATTERN OF ALCOHOL CONSUMPTION

	No.	Per cent
Nil always	9	4
Nil now—drank in past	5	2
Occasional drinker	149	59
Regular light drinker	46	18
Regular medium drinker	27	11
Regular heavy drinker	15	6

An 'occasional drinker' was defined as one who drank only at parties and/or weekends.

A 'regular light drinker' took one pint of beer or less per day and/or one whisky or gin per day.

A 'regular medium drinker' took up to two pints of beer per day, and/or two whiskys or gins per day.

A 'regular heavy drinker' took over two pints of beer per day, and/or three whiskys or gins per day.

A quarter bottle of wine was taken as equivalent to one pint of beer.

At 637 subsequent examinations, the overall pattern of alcohol consumption was found to be virtually unchanged (table XXVII).

In fact, however, these figures conceal changes in both directions. The habits were unchanged in 477 (76 per cent) and changed in 148

(24 per cent). There is a tendency for drinking to increase with increasing seniority and years; the stability of the overall figures must therefore be regarded as a satisfactory outcome of the repeated medical examinations. The general picture of only 17 per cent of higher executives in the regular medium and heavy drinking categories is certainly contrary to the popular conception. It coincides with our impression that excessive drinking is an increasing rarity among executives in British industry.

TABLE XXVII
PATTERN OF ALCOHOL CONSUMPTION AFTER INITIAL EXAMINATIONS

	No.	Per cent
Nil—unchanged	31	6
Occasional drinker	389	61
Regular light drinker	100	16
Regular medium drinker	69	10
Regular heavy drinker	48	7

Drinking habits were related to fitness in respect of our 889 executive years.

TABLE XXVIII
ALCOHOL CONSUMPTION RELATED TO FITNESS

	Fit		Unfit	
	No.	Per cent	No.	Per cent
Nil always	18	43	24	57
Nil now—drank in past	1	—	4	—
Occasional drinker	284	53	254	47
Regular light drinker	81	65	65	45
Regular medium drinker	44	46	52	54
Regular heavy drinker	21	33	42	67

The fittest group were the regular light drinkers, and fitness declined steadily as consumption increased.

Tobacco

The pattern of cigarette and pipe smoking at 250 initial examinations is shown in table XXIX.

There were 57 non-smokers of cigarettes or pipe, of whom 42 were ex-smokers and 15 had never smoked at all. That 17 per cent smoked 25 or more cigarettes per day shows how serious is the menace of smoking to the long-term health of the higher executive.

The smoking pattern at 639 subsequent examinations is shown in table XXX.

It will be seen that heavy cigarette smoking (25 plus) is reduced from 17 to 13 per cent, with a corresponding increase in the very light smokers (one to four) from five per cent to ten per cent. The pipe-smoking pattern is virtually unchanged. In fact, there was a greater range of change, both up and down than the composite figures show. Among the cigarette smokers, 31 per cent had changed their habits, and among the pipe smokers 12 per cent. Habits in respect of the pipe appear to be more firmly set than in respect of cigarettes.

TABLE XXIX

SMOKING HABITS ON INITIAL EXAMINATION

	No.	Per cent
Cigarettes		
Nil (or less than 1 per day) ..	94	38
1-4 per day ..	13	5
5-14 per day ..	32	13
15-24 per day ..	68	27
25-39 per day ..	37	15
40+ per day ..	5	2
Pipe		
Nil	181	72
Occasionally ..	23	9
Up to 1 oz. per week	10	4
1-4 oz. per week ..	27	11
4-6 oz. per week ..	7	3
6 oz. + per week ..	2	1

TABLE XXX

SMOKING HABITS ON SUBSEQUENT EXAMINATIONS

	No.	Per cent
Cigarettes		
Nil (or less than 1 per day)	248	39
1-4 per day ..	65	10
5-14 per day ..	72	11
15-24 per day ..	169	26
25-39 per day ..	66	10
40+ per day ..	19	3
Pipe		
Nil	475	74
Occasionally ..	37	6
Up to 1 oz. per week	30	5
1-4 oz. per week ..	76	12
4-6 oz. per week ..	14	2
6 oz. + per week	7	1

Fitness, as previously described, was related to tobacco habits in respect of 889 executive years (table XXXI).

Among both the pipe and cigarette smokers, it is the very occasional smokers and the moderate smokers who are fittest. As soon as the moderate smoking level is passed, fitness rapidly deteriorates.

Foreign visits

Enquiry was made about overseas visits, whether in connection with work, or on holiday, and about any ill-health associated.

In 665 executive years, there were 24 per cent of years with visits to Europe and/or the U.S.A., and 11 per cent to the tropics or subtropics.

Almost invariably the method of travel was by air, and multiple trips were common. Of the 35 per cent who went abroad, the distribution of air trips during the year was as follows:

24 per cent made one to five air trips; seven per cent made six to ten trips; three per cent made 11 to 20; and one per cent made more than 20.

The great majority of overseas visits were illness-free (88 per cent); in seven per cent there was abdominal upset; in less than one per cent some form of specifically tropical illness (usually malaria) was recorded; in five per cent there were other incidental illnesses.

The most popular and effective prophylactic and therapeutic agent was 'entero-vioform'. This proved superior to 'streptotriad'. It was also of value in relieving abdominal upset experienced on return to Britain.

TABLE XXXI
FITNESS RELATED TO TOBACCO CONSUMPTION

Cigarettes	Fit		Unfit	
	No.	Per cent	No.	Per cent
Nil (or less than 1 per day)	185	52	167	48
1-4 per day	44	57	34	43
5-14 per day	50	48	54	52
15-24 per day	127	54	110	46
25-39 per day	42	41	61	59
40+ per day	9	37	15	63
Pipe				
Nil	330	51	321	49
Occasionally	38	63	22	37
Up to 1 oz. per week	17	42	23	58
1-4 oz. per week	56	54	47	46
4-6 oz. per week	5	24	16	76
6 oz. + per week	1	11	8	89

There was no evidence of excessive nervous strain associated with short overseas trips, even when these were numerous, save in one individual who was both over anxious and hypochondriacal to start with.

Bowels

Higher executives are poor customers of those who sell laxatives or 'opening medicine' (table XXXII).

Sleep and sedatives

Sleep habits are not dissimilar to bowel habits (tables XXXII and XXXIII).

When sleep habits were related to evidence of strain, it was found that four (eight per cent) out of 49 of those showing strain slept badly; two (four per cent) out of 49 regularly took sedatives (table XXXIV).

TABLE XXXII
BOWEL HABITS (889 EXECUTIVE YEARS)

	<i>Per cent</i>
Bowels open regularly—never take laxatives	75
Bowels open regularly—very occasional laxative	12
Bowels open regularly—regular laxative at interval of one month or more	2
Bowels open regularly—laxative one week—one month ..	4
Bowels open regularly—laxative six—two days	2
Bowels open regularly—laxative daily	3
Bowels irregular	2

89 per cent have regular bowel habits with minimum dependence on laxatives.

TABLE XXXIII
SLEEP (889 EXECUTIVE YEARS)

	<i>Percent</i>
Always sleep well	75
Usually sleep well—occasionally badly	21
Sleep badly as a rule	4

Capacity to relax

Patients were asked if they were able to relax when the day's work was done (table XXXV).

TABLE XXXIV
SEDATIVES TAKEN AT NIGHT (889 EXECUTIVE YEARS)

	<i>Per cent</i>
Never ..	92
Occasionally	7
Regularly ..	2

TABLE XXXV
CAPACITY TO RELAX (889 EXECUTIVE YEARS)

	<i>Per cent</i>
Good ..	71
Fair ..	22
Poor ..	7

Among the seven per cent who relaxed poorly were five per cent who described themselves as 'always on the go'. Among the good relaxers one per cent regularly took a nap in the evenings often in front of the television screen.

Medicines taken

Nearly half the patients never took any medicines from one year's end to another (table XXXVI).

TABLE XXXVI
MEDICINES TAKEN (889 EXECUTIVE YEARS)

	<i>Per cent</i>		
	<i>Regularly</i>	<i>Occasionally</i>	<i>Total</i>
None	—	—	47
Aspirin	1	4	5
Other sedatives and hypnotics ..	2	7	9
Antacids	3	9	12
Laxatives	10	13	23
Antihistaminics	1	2	3
Other	—	—	14

The total is more than 100 as some took more than one type of medicine.

Some conclusions

The tables giving the health and habit patterns of the higher executives studied call for no further comment. We can, however, sum up our experience of the practical value of regular health examinations under six headings:

1. They give the doctor an opportunity to get to know the personalities of the senior people in the organization concerned and the way they react on one another.
2. They give the staff similar opportunities to get to know the personality of the doctor. They assess him, just as he assesses them, making judgment of his interest in them, his thoroughness, his technical skill and the value of his advice. And they react accordingly.
3. The examinations give the patient a chance to have an impartial extramural confessional. Once confidence is established, nothing appears to be withheld. Frequently both medical and social problems are 'saved up' for the examination.
4. Unrealized difficulties in work and social life are often detected and not infrequently corrected. These emerge particularly from the taking of the full social and occupational history.
5. Unnecessary anxieties about health and disease can be exposed and dealt with. The commonest of these concern lung cancer, coronary thrombosis and high blood pressure. They tend to come in crops, following the illness or death of a relative, colleague, or friend or acquaintance in another firm.
6. The purely medical value of these examinations is important but limited. Foolish habits in respect of smoking, lack of exercise, overeating and over-drinking are detected. But they are usually hard to alter, unless real ill-health administers the necessary fearful jolt. Not infrequently a chronic disability or ailment is discovered, calling for specialist or operative treatment. Among those most often seen were inguinal hernias, mild hypertension, varicose veins and chronic skin diseases. Serious disease was notable by its absence. Sometimes social adjustment was all that was required, particularly in the cases of mild hypertension.

The patients placed a high value on the thoroughness of the history taking

and the examination. They frequently commented that their own doctors "could not spare the time to go into things properly".

Compared with the run of patients seen in general practice, the higher executives have a great deal more to tell. This is partly because they are better able to verbalize. They are also more aware and observant and have excellent memories. Furthermore, the range of their experience is usually wider. As material for clinical investigation, they are ideal. But the time each patient needs is correspondingly increased.

As a universal national exercise, regular health examinations as here described are out of the question. To examine 50,000,000 people a year in this way would involve the services of the equivalent of something approaching 50,000 doctors. In terms of what is achieved medically, this would be unjustified. As an alternative, a large part of this type of medical surveillance might be done by the use of appropriately trained nurses, questionnaires, and auto-analysers. Even so, the final synthesis would take a substantial amount of 'doctor-time'.

Nevertheless, as a small-scale research exercise, we think our work has been valuable. Is there more to it than this?

The whole of modern life depends on the efficiency of its industrial organizations. Efficiency in turn depends not only on technical skill but also on group *morale*. We think that the regular health examination of higher executives as we have developed it is justified as one means of morale building. It does this partly by demonstrating practically that the organization cares about the well-being of those who carry the burdens of responsibility and leadership; and partly by increasing social, mental and physical efficiency and relieving frictions, which impede the efficient working of the group as a whole.

Everyone in industry—and outside it for that matter—is entitled to full and proper health care, both preventive and therapeutic. But it should not be the same for all. Those who are subjected to special hazards—lead or mercury or beryllium workers—need special protection and care. The same applies to those with special jobs—crane or lorry driving, chemical process work, and food handling. Among these special jobs is leadership. It is not unreasonable to look after our leaders as diligently as we look after our miners, chemical workers and bus drivers. This we think is the real justification for what we have been doing.

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