

# Time-trends (1983-1998) in smoking habits among Belgian physicians

by

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## Abstract

*A cross-sectional survey was conducted by the Belgian Lung and Tuberculosis Association (BELTA) in 1998 in a randomly selected sample of 4643 Belgian physicians and the results were compared with those of a similar survey conducted in 1983 among 3205 physicians. Both studies were founded on self-completed questionnaires with no biological validation of the smoking status. In 1998, the response rate was 64.8% for questions about the smoking and personal status, but 35.9% only for the other items.*

*Among the responders 17.3% were current, 28.7% former and 54.0% never smokers. With age, the rate of never smokers decreased and that of former smokers increased, whereas the rate of current smokers showed a symmetrical distribution for age. More male than female physicians were smoking: 19.4% versus 11.3% ( $p < 0.001$ ). No major differ-*

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ences in smoking rates were noted between GP's, certified specialists, specialists in training and other physicians. Among smokers, 61.6% were smoking daily and 38.4% occasionally; 62.0% smoked cigarettes and 44.4% other tobacco products. The median cigarette consumption was 12 per day for daily smokers; the Fagerström nicotine dependence test (FNDDT) of smokers was very low (median value = 1). Of former smokers 92.5% had quit by personal decision only, but 52.7% reported unsuccessful earlier quit attempts.

Since the large number of non-responders could cause a selection bias, a correction model was used, yielding a total smoking prevalence rate of 18.1%, which is notably lower than that in the general population of Belgium (30%). The smoking rate among physicians markedly decreased since 1983, when it amounted to 32%. This is due to the increase of never smokers in the numerous young physicians' group rather than to the increase of former smokers in the less numerous older physicians. The smokers' rate of Belgian physicians remains still higher than that among physicians in several other countries (< 10%).

## Key-words

Belgium, epidemiology, physician, smoking, health behaviour, trends.

## 1. Introduction

Although the health hazards of active and even passive smoking have been irrefutably documented, they still threaten today not far from one out of three adults in the general population of our country. Since interventions by physicians could be effective, both for preventing smoking initiation and for promoting smoking cessation (1-2), precise information about their current personal habits and behaviours in this matter should be useful for tackling and trying to correct their possible insufficiencies, if present.

The Belgian Lung and Tuberculosis Association (BELTA) thus decided to carry out a large cross-sectional survey in 1998 among a representative sample of physicians and to compare its results with those obtained during a similar investigation conducted in 1983 and reported in 1986 (3).

## 2. Methods

Two cross-sectional surveys were thus conducted among samples of Belgian physicians, respectively in 1983 and 1998. The present report includes part of the original data of 1998 and comparisons with the corresponding items of the first study (3).

### 2.1. Questionnaire

#### 2.1.1. Structure

Derived from the World Health Organization (WHO) and International Union Against Tuberculosis and Lung Disease (IUATLD) questionnaires (4-5), the self-administered, mail-back questionnaire of 1983 included 43 questions (37 for current, 31 for former and 25 for never smokers). The 1998 questionnaire included 41 questions (34 for current, 28 for former and 21 for never smokers). Many questions were similar in both questionnaires, but new questions were introduced in 1998 in order to address recent developments in the field. Full questionnaires are available at BELTA.

In both studies, multiple choice questions were used, with single encoding; the rate of encoding errors appeared very low during numerous controls.

In 1983, the responders were classified by themselves as current smokers, former smokers or never smokers. In 1998, the distribution in smoking categories was determined by their answers to the following two questions derived from the USA "Adult use of tobacco survey" (6):

1. Have you ever smoked at least 100 cigarettes in your life? [or their equivalent as another tobacco product, namely 50 cigarillos, 33 cigars or 2 packs of 50 g tobacco (pipe)]
2. During the last month, did you smoke regularly or occasionally any tobacco product?

Were classified as *current* smokers, responders answering yes to both questions, *former* smokers those answering yes to question 1 and no to question 2, and *never* smokers those answering no to both questions. Were considered *daily* smokers those smoking every day, all the others being classified as *occasional* smokers.

### 2.1.2. Procedures

The questionnaire was translated from French into Dutch and back-translated into French in order to ensure that questions were identical.

A pre-testing in five GP's, seven specialists and one specialist in training indicated that response time ranged between 5 and 15 minutes (mean: 10.2 min); some suggestions made by the responders were introduced into the final version.

The questionnaire was mailed in march 1998 to the physicians sampled, together with an explanatory letter specifying that the responses would remain anonymous for those analysing the survey.

When no response had been received after 4 weeks a second questionnaire was mailed. Whereas in 1983 a third postal questionnaire had been sent to persisting non-responders, this was not done in 1998. If no response had been received after 2 (3 in 1983) questionnaires, nurses from the respective french- and dutch-speaking respiratory health care organisations [Fondation contre les Affections Respiratoires et pour l'Education à la Santé (FARES)] and [Vereniging voor Respiratoire Gezondheidszorg en Tuberculosebestrijding (VRGT)] visited (1983) or phoned (1998) repeatedly the non-responders in order to obtain answers to the full questionnaire in 1983, or in 1998 to the main demographic questions (age, gender, postal code of work place), professional status (GP, certified specialist, specialist in training, or other) and smoking status [current smoker (not differentiating daily and occasional smokers), former or never smoker]. Anonymity during the analysis was also ensured for the oral responses. The survey was completed on October 15, 1998.

### 2.2. Sampling method

Preference was given to physician categories having regular patient contacts; they were selected from the March 1998 TVF files (Traitement des visites médicales et des fichiers médicaux), regularly used by the pharmaceutical industry for its contacts with the medical profession.

For sampling, a computer generated random list of numbers was used (random function of Excel) and each physician received a number. After stratification by language group and by physicians' category, in each subclass, the numbers were classified in increasing order and the smallest numbers were then selected in each category until the pre-

determined percentage of the number of physicians of the category was reached (Table 1, left).

These percentages had been chosen, taking into account the total number of physicians in the corresponding category, in order to reach response numbers sufficiently high to provide valuable data, and also the degree of involvement of the physician category in smoking prevention or cessation activities (GP's, pneumologists and cardiologists for active smokers, gynecologists and pediatricians for passive smoking, psychiatrists for nicotine dependence). The total sample included 4643 physicians (46% dutch speaking and 54% french speaking) of which 27.2% were women (26.8% dutch speaking and 27.5% french speaking).

TABLE 1  
*Sampling process and responses to both postal questionnaire(s) and telephone call(s)*

	Total population	Sample			Coherent responses*	% total population	% of the sample
	n	French speaking	Dutch speaking	Total n (%)			
General practitioners	14250	695	731	1426 (10)	1044	7	73
Cardiologists	822	256	155	411 (50)	222	27	54
Gynecologists	1458	215	149	364 (25)	186	13	51
(Neuro) Psychiatrists	1762	232	207	439 (25)	265	15	60
Internists	2381	337	258	595 (25)	461	19	77
Pediatricians	1528	214	168	382 (25)	216	14	57
Pneumologists	422	250	172	422 (100)	185	44	44
Others or unknown	12082	317	287	604 (5)	428	3.5	71
Total	34705	2516	2127	4643 (13.4)	3007	8.7	64.8

Both certified specialists and specialists in training are included in the total population and in the sample

\* mailback and phone together

In 1983, a smaller group of physicians (3205) had been contacted; the questionnaire had been sent to 12.5% of the GP's, 50.0% of cardiologists and internists, 100% of pneumologists and 12.5% of the other specialists; out of the 2173 answers received from physicians, 2157 were coherent.

### 2.3. Statistical analysis

Proportions were compared by chi-square test and their 95% confidence intervals (CI) were calculated taking into account the sampled fraction of the target population in the considered category.

A multiple logistic regression was performed on the rate of smokers in order to study the simultaneous influence of various characteristics. All statistical tests are two-tailed. A p value < 0.05 was considered as significant.

### 3. Results

#### 3.1. Contact with patients

Figure 1 confirms that the sample indeed mostly included physicians in direct contact with patients; one sees in the upper part (a) that most of them were spending more than 50% of their working time with patients. The lower part (b) shows that only very few physicians were largely involved in preventive activities.

#### 3.2. Response rate

A total of 1 683 physicians returned the questionnaire by mail; responses for all questions could be interpreted for all except 16 (i.e. 1667 respondents).

For questions regarding smoking status and its relationship with age, gender, language commonly used and professional status, out of 1360 answers obtained after one or more telephone calls from an additional 1360 physicians, 1340 were coherent.

The reasons for non-response after phone call(s) were the following:

Failure of contacting the physician, despite 1-3 calls	467
Change of residence	433
Retirement or death	82
Refusal	147
Claiming earlier response to the postal questionnaire	7
Unknown	464
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Total non-response after phone call	1600

Answers for demographic data (age, gender, language, professional status) and smoking status were thus obtained from 3043 physicians, 3007/4643 (64.8%) being coherent. For the other items, concerning particularities and evolution of their smoking habits, there were only 1667 coherent written answers in questionnaires having reached BELTA (1667/4 643 = 35.9% of the sample).

The distribution of responses according to physician categories is given in Table 1 (right). In all categories, except pneumologists, the response rate exceeded 50%.

### 3.3. Distribution of smoking status

The distribution of smoking status for the 3007 responses obtained in 1998 is the following: current smokers: 521 (17.3%; CI: 16.0-18.6); former smokers: 863 (28.7%; CI: 27.2-30.2) and 1623 never smokers

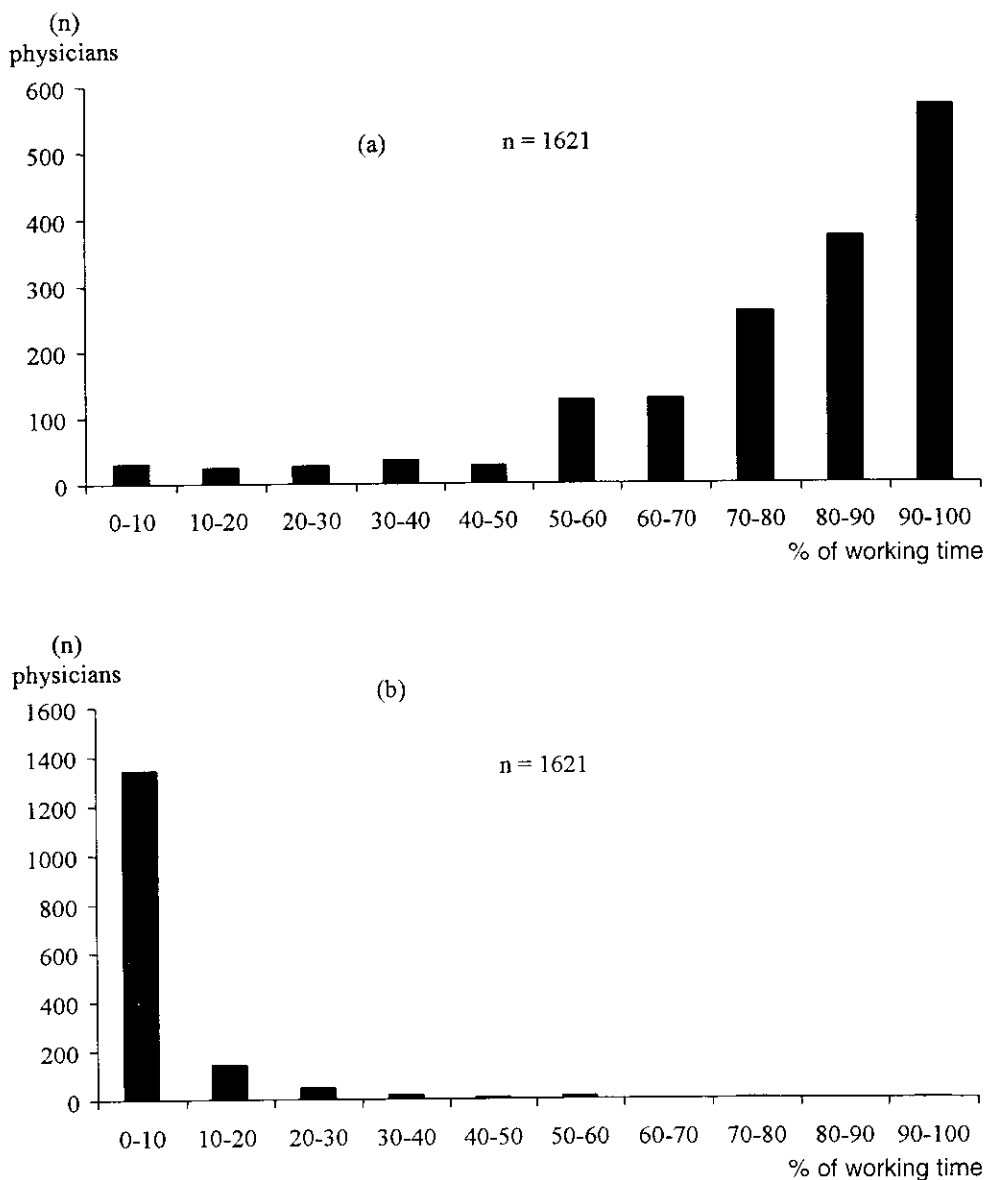


Fig. 1: Distribution of times spent in contact with patients (a) and in preventive medicine (b) in the same physicians population (written answers to the questionnaires)

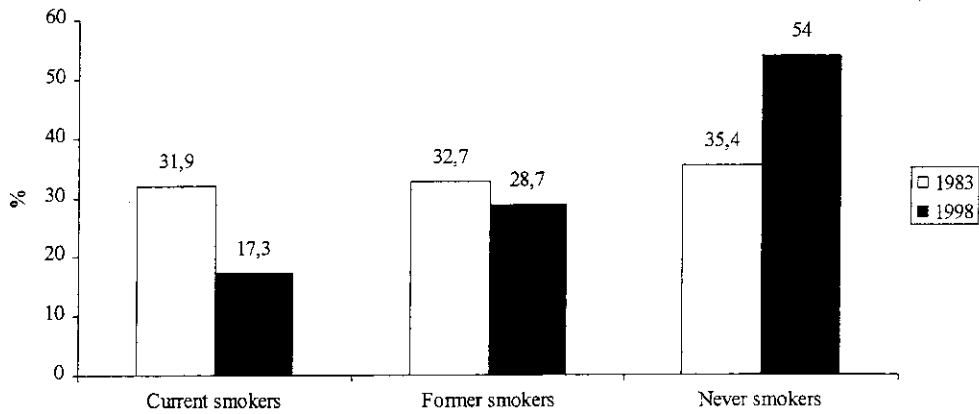


Fig. 2: Difference in prevalence of the various smoking status between the two transversal studies

(54.0%; CI: 52.3-55.7). Comparison with 1983 data, represented in Figure 2, shows a major decrease in current smoking rate, together with a slight decrease in former smokers and a clear increase in never smokers. This latter increase is mainly due to the high rate of never smokers in the large cohort of young physicians (Figure 3). The rate of never smokers decreases importantly with age. The former smokers are more prevalent among doctors aged 50 or more, who represent 31.2% of the sample. For current smoking there is only limited variation throughout age groups with a symmetrical distribution.

Table 2 (left) shows as expected that there are significantly more current and former smokers among men, and far more never smokers among women, who represent 25.5% of the 1998 answers.

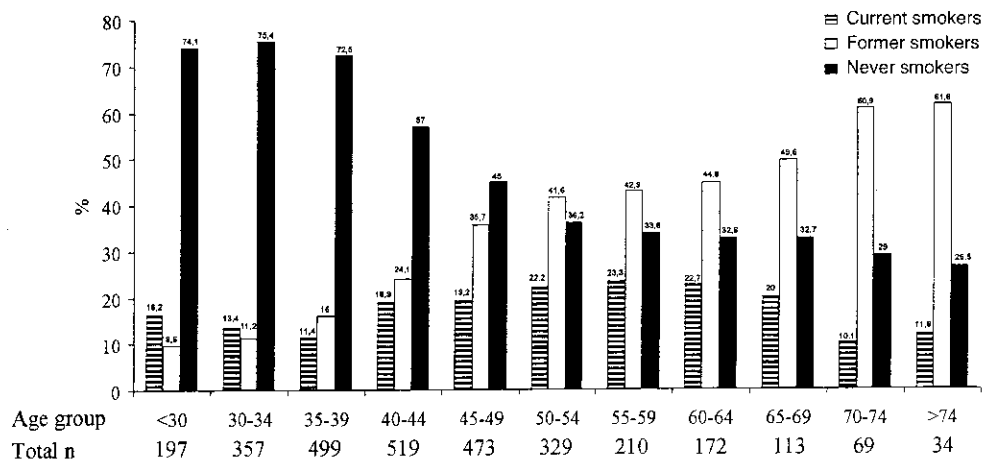


Fig. 3: Smoking status and age groups (1998)



TABLE 2  
Smoking status, gender and communities (1998)

	Men n = 2238 %	Women n = 768 %	French speaking n = 1567 %	Dutch speaking n = 1440 %
Current smokers	19.4*	11.3*	19.5*	14.9*
Former smokers	32.9	16.5	28.3	29.2
Never smokers	47.7	72.1	52.2	55.9
Total	74.5	25.5	52.1	47.9

\*  $p < 0.001$  for the difference of smokers among men vs women (OR: 1.86 [1.43 – 2.40]), among french vs dutch speaking physicians (OR: 1.43 [1.17 – 1.73]) after adjusting by logistic regression for mail or telephone response, age, doctors category, language (for gender) and gender (for language).

For language groups (Table 2, right) the rate of current smokers is slightly but significantly larger among french speaking physicians; there were slightly (without statistical significance) more never smokers in the dutch-speaking group, and similar numbers of former smokers in both language groups.

Regarding the various physician categories, the rate of smokers tended to be somewhat (although non significantly) lower among acknowledged specialists than among GP's (OR 1.18; CI 0.96-1.45 after correcting for age, sex, language and answers category). The rate of never smokers is higher among specialists in training than among the others. The regressive time-related trend of smokers between 1983 and 1998 is present among GP's (from 34.5% to 18.1%) as well as among specialists (certified and those in training grouped: 30.7 to 16.5%).

Among the various specialities, no significant differences in the rates of current smokers were noted, with the exception of those of gynecologists and neuropsychiatrists, whose smoking rates of 22.0 and 23.0% respectively clearly exceed those of the other specialists (14.3%) ( $p = 0.006$  and  $p < 0.001$  respectively).

### 3.4. What are physicians smoking?

For this question and further ones the data base is restricted to the 1667 printed questionnaires returned by mail and the response rates concern the individual question with the total number of returned questionnaires as denominator.

TABLE 3  
Smoking status and physicians' categories

	General practitioners n (%: CI)	Specialists in training n (%: CI)	Certified specialists n (%: CI)	Others n (%: CI)
Current smokers	196 (18.8: 16.5-21.1)	35 (18.9: 13.4-24.5)	281 (16.2: 14.6-17.8)	8 (22.2:10.5-34.0)
Former smokers	306 (29.3: 26.7-32.0)	24 (13.0: 8.2-17.7)	518 (29.9: 27.8-31.9)	13 (36.1: 22.5-49.7)
Never smokers	542 (51.9: 49.0-54.8)	126 (68.1: 61.5-74.7)	936 (53.9: 51.7-56.2)	15 (41.7: 27.7-55.6)

Out of the 259 smokers who answered the postal questionnaire, 157 (61.6%) were daily and 98 (38.4%) occasional smokers; thus over one third of the smoking physicians do not appear to smoke every day (response rate: 98%).

Among current smokers, the majority (62.2%) smokes cigarettes, but other tobacco products are also used frequently, altogether by 44.4% of the smoking physicians. In 1983, the diversity in use of tobacco products was higher than in 1998.

The median values of the daily consumption are as follows in 1998 for daily smokers:

Cigarettes (n = 103)	12/day (maximum: 50/day)	Response rate: 94%
Cigarillos (n = 29)	5/day (maximum: 20/day)	Response rate: 97%
Cigars (n = 27)	2/day (maximum: 15/day)	Response rate: 88%
Pipe (n = 23)	35g/week (maximum: 100g/week)	Response rate: 90%

TABLE 4  
Types of tobacco products used by current smokers  
(daily and occasional)

Tobacco products	n*	1998		1983	1983-1998
		% of 259 smokers *	% of 1 667 responders*	% of 2 143 responders*	% decrease in responders
Cigarettes all types	161	62.2	9.7	—	—
Hand rolled	9	3.5	0.5	0.9	44.5
Filter	143	55.2	8.6	14.4	40.3
Without filter	10	3.9	0.6	3.8	84.2
Other tobacco products	115	44.4	6.9	—	—
Cigarillos	57	22.0	3.4	10.4	67.3
Cigars	52	20.1	3.1	7.1	56.3
Pipe	39	15.1	2.3	6.9	66.7

\* Differences in totals of numbers and percentages result from the fact that some smokers use more than one type of tobacco product

Among 103 daily cigarette smokers, 33 smoke at least 20 cigarettes per day (heavy smokers). This represents 2% of the answers to the questionnaire returned by mail.

The time at which the first morning cigarette is lighted is distributed as follows (response rate: 58% of the 259 current smokers):

Time after waking up: 0-5 minutes	8.7%
6-30 minutes	22.1%
31-60 minutes	18.1%
> 60 minutes	51.0%

### 3.5. *Fagerström test for nicotine dependence (FNDDT) in cigarette smokers*

The scores are based on the responses to the test simplified to 2 questions (7) and provided by 116 (72%) of the 161 current cigarette smokers. The dependence is very weak (scores 0-1-2) in 69%, weak (score 3) in 13%, median (score 4) in 9%, high (score 5) in 8% and very high (score 6) in 2% of the cigarette smokers. The median value of the score is very low (= 1).

### 3.6. *The smokers' career*

The response rates for the different questions were usually higher among former (505) than among current (259) smokers.

#### 3.6.1. *Age of smoking initiation*

It is similar among current and former smokers, with a peak for the age group 15-20 years (Figure 4).

#### 3.6.2. *Recent evolution of smoking habits in current smokers*

Among current smokers (74.0% responders), 11.0% smoke more, 32.5% less and 56.5% the same amount as two years ago. Half (66) of the current smokers who responded (133) declare now using "lighter" cigarettes than two years ago.

Few (23 = 13.9%) of the 166 responders (64.0%) did actually change their type of tobacco use, most frequently from cigarettes to other tobacco products.

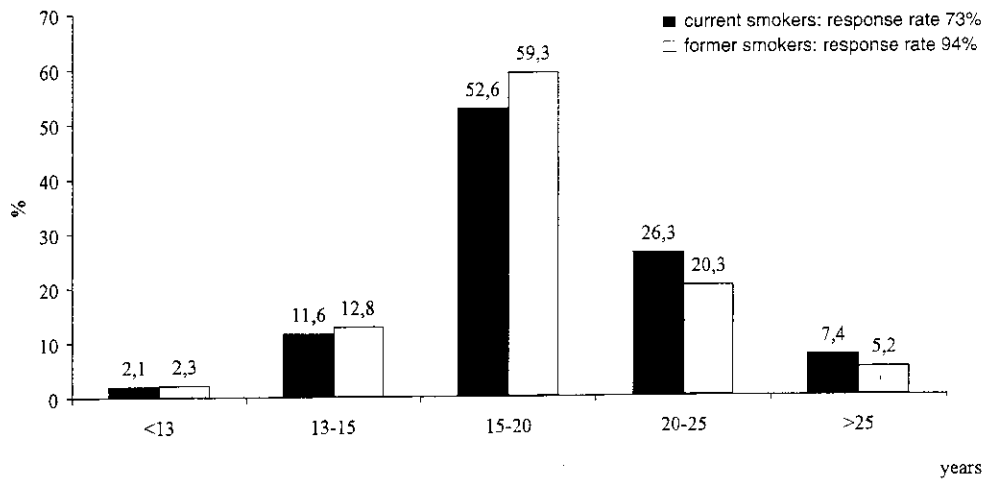


Fig. 4: Age at smoking initiation

The wish for smoking cessation is expressed by 59.1% of the current smokers, 40.9% being reluctant or even decided to continue (193 responses i.e.75.0%).

Finally, former unsuccessful quit attempts of at least one week duration are mentioned by respectively 23.2% (once) and 41.1% (several times) of the 190 responders (73%).

### 3.6.3. Evolution of smoking habits in former smokers

From the mean duration of daily tobacco smoking in former smokers it appears that 243 out of 475 (51.2%) former smokers had smoked for more than 10 years (response rate 94%). Nevertheless, most of them seemed only weakly dependent during their smoking period, since 79.4% lighted their first cigarette 30 minutes or more after awakening (response rate 95%). Most former smokers had stopped since 2 years or more (93.0%).

### 3.6.4. Methods of quitting

In 483 former smokers (96.0%), the methods to which the successful cessation is attributed are: a personal decision only in 92.8%, nicotine substitution in 6.0% and others in the remaining 1.2% (five days plan, acupuncture, laser therapy). Earlier unsuccessful quit attempts are mentioned by nearly all of the former smokers responding (89% out of 505), respectively once (22.1%) and several times (30.6%). The frequency of

TABLE 5  
Main reasons for quitting smoking

	Current smokers (potential reasons)	Former smokers (actual reasons)
Number (%) of responses	179 (69%)	477 (94%)
Fear for health hazards	55.9%	53.9%
Freeing from dependence	16.2%	14.7%
Present disease symptoms	7.8%	8.4%
Family pressure	5.6%	4.4%
Hazards for family	2.2%	4.4%
Conformity with advices given to patients	3.9%	7.3%
Others	8.4%	6.9%
Total	100.0%	100.0%

their unsuccessful quit attempts is thus somewhat lower than that of current smokers.

#### 3.6.5. Reasons for quitting smoking

These appear in Table 5, jointly for current (potential reason if quitting would be considered) and for former smokers (actual reason). The fear for health hazards is largely predominant in both groups (55.9 and 53.9%). No major difference was observed between the two groups.

## 4. Discussion

The survey is mainly based on questionnaires returned by mail, complemented for missing responses by a visit (1983) or a telephone call (1998), either enquiring about all data (1983) or about essential information related to demographic and smoking status (1998). Although different in some details, the methods applied in both surveys allow valid comparisons. In particular, the modified partitioning of physicians into their various categories cannot have had a major impact upon the general conclusions, since there are no statistically significant differences in smoking rates between the various groups of physicians (except in neuropsychiatrists and gynecologists).

Combining the results of telephone calls and written answers seems valid, since the different methods used for administering the screening questionnaire have no effect on the type of responses (8).

The self-reported smoking status could not be biologically validated in our very large sample.

The accuracy of self-reported smoking in comparison with biologically validated data is quite variable across studies, with an average sensitivity of 87.5% and average specificity of 89.2% (9). Self-administered questionnaires are somewhat less sensitive than those taken by interview, and surveys in student populations yield significantly lower sensitivity than those in the general population (9). Both factors could induce an underestimation of the smoking prevalence among doctors, who, like students, are susceptible to be dissonant with their own smoking behaviour and to conceal it.

Non-response rate in our 1998 survey is rather high (37.5%) and could also induce a bias towards an underestimation of smoking prevalence. Smoking rate among the responders to the first mailing was lower (12.9%) than among those to the second mailing (19.0%) and to the telephone call (19.6%). The relative difference in prevalence estimates between early and late responders is thus as high as 59%!

In these conditions, it seems safer to use a model which assumes smoking prevalence of non-responders or non-interpretable answers to be more similar to late responders, i.e. 19.6%, than to early responders(10): 321 smokers (= 19.6% of 1 636 non responses + non-interpretable answers) added to 521 smokers among the responders in a total sample of 4 643 physicians doctors yields an overall smoking prevalence, corrected for response bias, of 18.1%, but this still remains a conservative estimation. Finally, the response bias is 5,5% (11).

Higher values of smoking prevalence had been observed in another study (12) among dutch speaking GPs (40% smokers in 1986 vs 32.4% among dutch speaking doctors in our 1983 survey and 14.9% in our 1998 survey), while in our both studies, no significant differences existed between GPs and specialists.

More coherent with our own observations is the intermediate smoker's rate of 26.3% observed in 1991 (13) among 1869 belgian physicians (specialists and GPs together).

The high rate of never smokers among specialists in training in comparison with the others (GPs and ascertained specialists) (Table 3) is probably due to a cohort effect, since they are mostly younger and probably better aware of risks related to smoking than their elders.

The uncorrected smoking prevalence (grouping both daily and occasional smokers) of 17.3% among Belgian physicians in 1998 is much lower than the prevalence of 30% recorded in 1997 in a sample of 10000 subjects of the general Belgian population older than 15 years (14). However, these differences must be interpreted with caution, since there are demographic differences between the samples of physicians and of the general population (higher age and more males among the former). Differences in socio-economical status and better awareness of the smoking-related risks can also play a role. Even if one compares doctors with the subjects of the general population having completed secondary school education, the percentage of smokers remains lower among physicians (17.3 vs 24.2%).

The declining time-trend in smoking prevalence among doctors is due to the markedly increased rate of never-smokers in the physicians below 35 years (74.9% in 1998 vs 48.8% in 1983) rather than to the small increase of former smokers in the physicians above 50 years (45.6% in 1998 vs 43.1% in 1983), another example of the importance of primary prevention. This declining trend parallels that in the general Belgian population, but in the latter the decrease seems to stabilize around 25-30% since 1992. (15)

In other countries, declining trends in smoking prevalence also occurred among doctors. The 1996 prevalence is particularly low in the UK (7%), Sweden (5%), Australia (6%) and the USA (5%) (16). The phenomenon is far from generalized, since high smoking prevalence levels are currently recorded among doctors in Southern and Eastern European countries (17), and also in some developing countries, such as China (18) and in Latin America, where physicians even smoke more than the general population!

The results concerning the items not concerned by the telephone calls should be interpreted with more caution, since the lower response rates to the two postal questionnaires (35.9%) could induce larger bias. Any way, differences in smoking between physicians and the general population (14) are very large if one considers rates of daily smokers (9.4% vs 25.5%), of heavy smokers of > 20 cigarettes/day (2.0% vs 10.0%) and of small or large cigars as well as pipe smokers (6.9% vs 1.0%).

The level of nicotine dependence among doctors and health professionals has until now been poorly studied. In the former Yugoslavia very

high levels of dependence were noted among 257 medical workers, including doctors.(19), and this was also true in Portugal where three quarters of the smoking physicians in a general hospital showed a high level of nicotine dependence (20) and in Italy where the Fagerström score is  $\geq 5$  among 71.3% of the smoking staff members in 58 hospitals (21). In our survey, the very low level of dependence among doctors could be considered as a favourable factor for success in future quit-attempts. However, one should avoid a premature optimism since these responses only relate to 157 cigarette smokers out of the estimated total of 842 and since 64.3% of the current smokers mention former unsuccessful quit attempts.

## **5. Conclusions**

The downward trend in smoking prevalence registered among Belgian physicians between 1983 and 1998 should be considered as a quite encouraging evolution. Sustained efforts are nevertheless imperative in order to achieve the low levels found in Northern Europe, Australia and USA, countries where the low prevalence among doctors parallels declining levels of smoking in the general population (17).

As shown in our first survey (3) and in many others, smoking physicians are less likely to actively help their patients in controlling their smoking habits. A further decrease in the smoking behaviour of health professionals could thus result in a multiplying effect, and contribute to restore the downward trend in prevalence among the general population of Belgium.

Persuading physicians of the importance of their model role, both implicit and explicit, for preventing smoking among their patients and the population, publicising their successes and providing them more information about the adverse effects of smoking as well as various quitting methods available to them, could all contribute to a further decline in smoking prevalence in the general population.

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## **Résumé**

La Belgian Lung and Tuberculosis Association (BELTA) a conduit en 1998 une enquête transversale dans un échantillon de 4643 médecins belges sélectionnés au hasard et en a comparé les résultats avec ceux d'une enquête similaire menée en 1983 parmi 3205 médecins. Dans les deux enquêtes, l'on a recouru à des questionnaires auto-administrés, sans validation biologique du statut tabagique. En 1998, le taux de réponse fut de 64,8% pour le statut tabagique et ses relations avec les données démographiques, mais de 35,9% seulement pour les autres questions. Parmi les répondants, on a identifié 17,3% de fumeurs, 28,7% d'ex-fumeurs et 54,0% de non-fumeurs. Avec l'âge, le taux des non-fumeurs décroît et celui des ex-fumeurs augmente; celui des fumeurs a une distribution symétrique par rapport à l'âge. La prévalence du tabagisme est de 19,4% chez les hommes et de 11,3% chez les femmes ( $p < 0,001$ ). On n'a pas observé de différence notable du taux de fumeurs entre généralistes, spécialistes, candidats spécialistes ou autres médecins. Les fumeurs se répartissent en 61,6% de fumeurs quotidiens et 38,4% de fumeurs occasionnels; 62,0% fument des cigarettes et 44,4% d'autres produits du tabac. La consommation médiane de cigarettes est de 12/jour pour les fumeurs quotidiens; le score médian de dépendance nicotinique est très bas (valeur:1) chez les fumeurs. Chez 92,5% des ex-fumeurs, l'arrêt est attribué à la seule décision personnelle, mais des tentatives antérieures infructueuses sont signalées par 52,7% d'entre eux.

Il faut s'attendre à un biais de sélection en raison du grand nombre de non-réponses: une prévalence corrigée de 18,1% est proposée. On note une importante diminution de la prévalence du tabagisme des médecins depuis les 32% de 1983. Ceci est attribuable plutôt à une augmentation du taux de non-fumeurs chez les nombreux jeunes médecins qu'à une augmentation des ex-fumeurs chez les médecins plus âgés, moins nombreux. Le taux actuel de fumeurs chez les médecins est nettement plus bas que dans la population générale belge (30%), mais plus élevé que chez les médecins de divers autres pays (< 10%).

**Mots-clé:** Belgique, épidémiologie, médecin, tabagisme, comportement-santé, tendances.

## Samenvatting

Een dwarsdoorsnee enquête naar rookgewoonten werd in 1998 door Belgian Lung and Tuberculosis Association (BELTA) uitgevoerd bij gerandomiseerde representatieve groepen van Belgische artsen (4643 in aantal) en vergeleken met een gelijkaardige enquête uitgevoerd in 1983 bij 3205 artsen. Beide studies zijn gebaseerd op zelf-beantwoorde vragenlijsten, zonder dat enige biologische validatie gebeurd is van de actuele rookgewoontes. In 1998 bedroeg het percentage antwoorden op vragen naar rookgewoonten en persoonlijke gegevens 64.8%, terwijl de respons op de overige vragen slechts 35.9% bedroeg.

Van de responders waren er 17.3% actuele rokers, 28.7% gewezen rokers en 54.0% nooit-rokers. Met de leeftijd daalt het percentage nooit-rokers en stijgt dat van de ex-rokers, terwijl de leeftijdscurve van de actuele rokers een symetrische distributie vertoont. Meer mannelijke dan vrouwelijke artsen waren rokers: 19.4% versus 11.3% ( $p < 0.001$ ). Er werden geen belangrijke verschillen gevonden tussen de percentages rokers bij huisartsen, erkende specialisten, specialisten in opleiding of andere artsen. Van de rokers waren 61.6% dagelijkse en 38.4% occasionele rokers; 62.0% rookten sigaretten en 44.4% andere soorten tabak. Het mediane sigarettenverbruik van dagelijkse rokers bedroeg 12 per dag. Volgens de test van Fagerström lag de nicotine-afhankelijkheid van de rokers zeer laag (mediane waarde = 1). Van de ex-rokers had 92.5% met roken gestopt uitsluitend ten gevolge van een persoonlijke beslissing, maar 52.7% van hen vermeldde wel eerdere mislukte pogingen.

Aangezien het groot aantal non-responders tot een selectiefout kon leiden werd een correctiemodel toegepast, waardoor de prevalentie van rokers stijgt van 17.3% tot 18.1%, een percentage dat in ieder geval merkkelijk lager ligt dan de 30% rokers in de algemene Belgische bevolking. In 1983 bleken nog 32% van de Belgische artsen rokers te zijn. Vijftien jaar later is dat percentage bijna gehalveerd eerder ten gevolge van een stijging van de nooit-rokers bij de talrijke jonge artsen dan van een stijging van de ex-rokers bij de minder talrijke oude artsen. Het percentage rokers bij belgische artsen ligt nog steeds beduidend hoger dan bij artsen in verschillende andere landen ( $< 10\%$ ).

**Sleutelwoorden:** België, epidemiologie, artsen, roken, trends.

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