# The frequency of epistaxis in a male population sample

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SUMMARY

*In a population sample consisting of 507 males aged between 50 and 60 years and 120 thirty-year-old sons of these males the frequency of epistaxis and predisposing factors of epistaxis were studied.*
*Only one-third of the subjects had never had epistaxis. One out of ten subjects had been treated for epistaxis by a doctor at least once in his life. About 3 per cent had had nose-bleeds during the previous week.*
*Statistically it was shown that a history of upper respiratory infection and intake of acetylsalicylic acid separately might predispose to epistaxis.*

TWELVE years ago a population study was started in Göteborg in order to investigate the morbidity and mortality in hypertension. The present investigation is part of a follow-up of this population study.
All subjects in the study were questioned and examined by several medical specialists. This paper reports the answers to questions about epistaxis. In a future publication correlations between epistaxis and various conditions and diseases will be presented, in order to evaluate factors predisposing to epistaxis.

## STUDY GROUPS

In the city of Göteborg there are about 30.000 males aged between 50 and 60 years. From these males 507 subjects were randomly selected and questioned during the period February 1973 and June 1974.
During the same period 120 males aged between 27 and 33 years were also examined. This group constituted every son of the 60-year-old males.

## METHODS

All subjects were asked nine questions about epistaxis by the examining doctor, as follows:

1. How often do you bleed from the nose:
   a. Never had any nose-bleeds
   b. Have had occasional nose-bleeds many years ago

Paper presented at the 6th Congress of the European Rhinologic Society, Erlangen, September 1975.

c. Have had occasional nose-bleeds formerly
d. Have had occasional nose-bleeds every year
e. Have had several nose-bleeds every year (*habitual bleeders*)

2. Have you at any time consulted a doctor and been treated for nose-bleeds? yes / no
3. Have you been treated for nose-bleeds during the last year? yes / no
4. Have you had any nose-bleeds during the last seven days (*recent bleeding*) yes / no
5. Do you have any close relatives who get nose-bleeds frequently? Parents: yes / no. Children: yes / no. Brothers or sisters: yes / no
6. Do you use to bleed from the nose when you have a common cold? yes / no
7. Do you use to bleed from the nose when you are tired and/or busy and/or stressed? yes / no
8. Have you at any time during the last seven days had a common cold, sore throat or fever? yes / no
9. Have you at any time during the last seven days taken any drugs for headache or aches or pains? (the names of eight of the most common drugs containing acetylsalicylic acid were mentioned) yes / no

The statistical analyses were performed using contingency tables (Petruson, 1974).

## RESULTS

The frequency of subjects who had never had epistaxis was 34 per cent. About 10 per cent of those examined had at some time been treated for epistaxis. About 3 per cent had had nose-bleeds during the previous seven days.

As shown in table 1, the only difference in frequency between fathers and sons was that more sons than fathers had noted an association between epistaxis and stress.

In the older age group 7 per cent were habitual bleeders. The habitual bleeders had been treated for epistaxis more frequently ($p < 0.02$) than the other subjects

| | 50-60 years old | 30 years old |
|---|---|---|
| Total number of subjects | 507 | 120 |
| Never had any nose-bleeds | 174 (34%) | 40 (33%) |
| Occasional nose-bleeds many years ago | 168 (33%) | 34 (28%) |
| Occasional nose-bleeds formerly | 103 (20%) | 19 (16%) |
| Occasional nose-bleeds every year | 29 ( 6%) | 15 (13%) |
| Several nose-bleeds every year | 33 ( 7%) | 12 (10%) |
| Treated for epistaxis by a doctor | 48 (10%) | 17 (14%) |
| Treated last year | 4 ( 1%) | 1 ( 1%) |
| Nose-bleeds last seven days | 17 ( 3%) | 5 ( 4%) |
| Close relative with frequent nose-bleeds | 52 (10%) | 17 (14%) |
| Association epistaxis - common cold | 64 (13%) | 14 (12%) |
| Association epistaxis - stress | 30 ( 6%) | 19 (16%) |
| Common cold last seven days | 126 (25%) | 35 (29%) |
| Intake of acetylsalicylic acid last 7 days | 115 (23%) | 22 (18%) |

Table 1. Number and per cent of subjects who answered to the different questions about epistaxis.

(Table 2). They had also had nose-bleeds during the previous seven days more often ($p < 0.01$).

| | |
|---|---|
| Habitual bleeders (several bleedings every year) | 33 subjects (7% of all) |
| treated for epistaxis | 8 (24%) |
| recent bleeding | 9 (27%) |

Table 2. Number of 50-60 years old subjects with habitual bleeding.

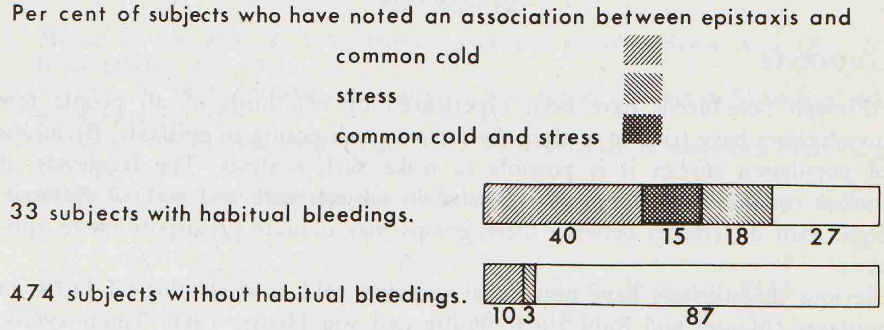
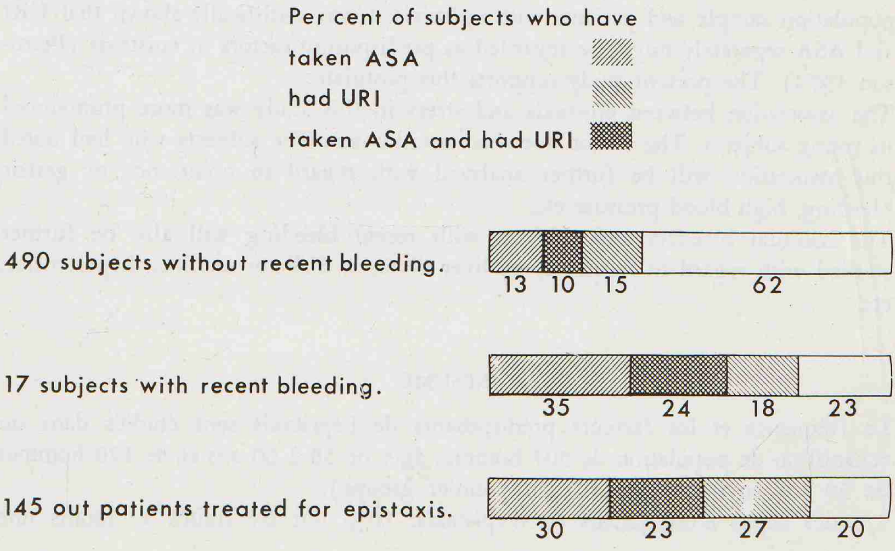



Figure 1.

The habitual bleeders had noted an association between epistaxis and common cold and between epistaxis and stress more frequently ($p < 0.01$) than the other subjects (figure 1).

The subjects who had had nose-bleeds during the previous week were analysed with regard to history of upper respiratory infektion (URI) and intake of acetylsalicylic acid (ASA). It was noted that subjects with recent nose-bleeds had had

Figure 2.



an URI ($p < 0.10$) and had taken ASA ($p < 0.01$) to a greater extent than the other subjects (figure 2).

These results were compared with those from a previous investigation of 50 to 60-year-old outpatients treated for epistaxis (Petruson 1974). The frequency of history of URI and intake of ASA were identical between the outpatients and the subjects with recent bleeding. The differences in frequency between the outpatients and the subjects without recent bleeding were significant ($p < 0.01$).

## COMMENTS

Although nose-bleeds have been experienced by two-thirds of all people few investigators have tried to analyze the factors predisposing to epistaxis. By means of population studies it is possible to make such analyses. The frequency of various conditions and diseases are noted in subjects with and without epistaxis. Significant differences between these groups may indicate predisposition to epistaxis.

Previous investigators have noted that common cold is an etiological factor in epistaxis (Maurer and Rühl 1965, Phillip and von Harder 1966, Timm 1966). In this study the association between epistaxis and common cold had been observed by 55 per cent of the habitual bleeders.

The frequency of URI was higher in subjects with recent bleedings than in those without, which supports the hypothesis that common cold predisposes to epistaxis. When suffering from a common cold many people take ASA. In the past little attention has been payed to the side effects of ASA. This drug is now known to interfere with primary haemostasis in bleeding and is believed to induce gastric bleeding.

In this study it was noted that significantly more subjects with recent nose-bleeds had taken ASA than subjects without. In a previous investigation on another population sample and patients with epistaxis it was statistically shown that URI and ASA separately might be regarded as predisposing factors in epistaxis (Petruson 1974). The present study supports this postulate.

The association between epistaxis and stress in this study was more pronounced in young subjects. The reason for this in unknown. The subjects who had noted this association will be further analyzed with regard to occurrence of gastric bleeding, high blood pressure etc.

The habitual bleeders and subjects with recent bleeding will also be further studied with regard to frequency of liver diseases, diabetes mellitus, hypertension etc.

## RÉSUMÉ

La fréquence et les facteurs prédisposants de l'épistaxis sont étudiés dans un échantillon de population de 507 hommes âgés de 50 à 60 ans et de 120 hommes de 30 ans environ (tous fils du premier groupe).

1/3 des sujets n'ont jamais eu d'épistaxis. 10% ont été traités au moins une

fois pour épistaxis au cours de leur existence. 3% avaient présenté une épistaxis durant la semaine précédant l'enquête.
Statistiquement, il est démontré qu'une infection des voies aérinnes supérieures et la prise d'acide acétyl salicylique peuvent, séparément, prédisposer à l'épistaxis.

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