Better sleep with dilated nose

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In the last issue of "Rhinology" (1989; 27: 136) Dr. Jan Wind raised some questions about the value of the nasal dilator Nozovent® which I presented in "Rhinology" 1988; 26: 289-292. Since then more than a hundred subjects, many of them colleagues, have had the opportunity to use Nozovent®. At the out-patient department of our clinic I have tested the dilator on 50 patients who had difficulties in breathing through the nose during the night; some of them were snorers and some had a dry throat when they woke up in the morning. After having put together the information got from these patients I want to share my knowledge with the readers of "Rhinology" as an answer to the above mentioned Letter to the Editor.

NOZOVENT®
The dilator is produced from a medical grade synthetic material and consists of two end tabs with a connecting bar placed outside the nose. The end tabs, one in each nostril, are pressed against the skin of the lateral walls in the nasal vestibule by the elasticity of the bar. The outsides of the slightly bended end tabs are covered with knobs to increase friction and the interior parts are drop formed to fill the floor of the nasal vestibule like a hook (Figures 1 and 2). The pressure against the skin is comparable with that of a clock around the wrist. The dilator fits into most "normal size" Caucasian noses.

SUBJECTS
34 of the 50 patients were men with a mean age of 40 years (S.D. 10 years) and 16 were women with a mean age of 48 years (S.D. 13 years). A deviation of the nasal septum was found in 11 patients, three of them were recommended septal surgery. A narrowed nasal valve was found in eight patients. Each patient was asked to use the dilator every second night for 3-4 weeks and then to come back. They were requested to record snoring and periods of awake-ness during the night, as well as whether they were tired or had a dry mouth in the morning. Furthermore, they were asked to mention whether they had noted any difference in sleep between the nights when they used and did not use.
Nozovent*. What difference? Did Nozovent* easily fall out? How often did it fall out? Did they want to use the dilator in the future? How often? About half of the patients answered all questions, the other patients were questioned at the second visit and the answers were written down by the author.

RESULTS
Of all patients 44 had noted a difference in sleep when using Nozovent*. Six did not, four of them did not want to use it in the future. Two patients did not note any difference but wanted to use it in the future nevertheless, one of them did not snore as much as before and one had a less dry mouth in the morning. Two other patients had noticed a difference but did not want to use the dilator in the future.
in one patient the dilator did fall out continuously and one patient could not sleep
due to the pressure of the dilator against the nasal skin. So 44 patients wanted to
use Nozovent* in the future and 31 wanted to do so every night. A better sleep
was noted by 40 patients. When classified in different indications it was found that
26 patients had trouble with snoring which decreased in 23 (88%). Less than half of
the patients had periods of awakeness during the night and more than half of them
noted a decrease when using the dilator. About half of the patients were tired in
the morning and half of them felt less tired when they had slept with a dilated nose.
Out of 34 patients who had a dry mouth in the morning 28 patients (80%) had noted
less dryness and in one third of the cases no dryness at all, when sleeping with
Nozovent*.

During day-time the dilator did not fall out spontaneously but during sleep it did so
in 11 of the patients, when they rotated in the bed, buried the nose in the pillow or
put their hand against the nose. Anatomical abnormalities of the nose like a
shallow nasal floor or wide nostrils played also a role.
That beauty comes before health even during the sleep was a somewhat surprising
observation. Young women obviously dislike to sleep with the dilator, even if it
gives less complaints of snoring and a dry mouth in the morning!

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Case reports:
Out of the fifty patients examined I have chosen to present four to show different aspects of sleeping with dilated nose.

Case 1:
A 45 years old man with a severe deviation of the nasal septum in the left valve area - an obvious indication for septal surgery which also was performed after the test period. He snored regularly and severly, waking his wife several times every night and was always tired when he woke up in the morning. With a dilated nose the snoring decreased significantly, in 4 out of 5 nights he did not snore at all, he was no longer tired in the mornings.

Case 2:
A 48 years old man without any nasal abnormalities. He never snored and woke up tired every morning with a dry throat. When using the nasal dilator he felt thoroughly rested and had no dryness in the mouth in the morning. After having used the dilator for some time he observed that he had 1-2 hours less need for sleep every night. He does not sleep with open mouth any more and the dilator never falls out.

Case 3:
A 52 years old woman with a normal nose. She wakes her husband every night with her snoring. In the morning her throat is dry and she is tired. When sleeping with dilated nose she snores less but still wakes her husband. She is tired as before in the mornings but she never wakes with a dry throat. She wants the dilator every night and it never falls out.

Case 4:
A 25 years old woman with a deviated external nose. She sleeps alone, wakes herself up with snoring and is tired in the mornings. She experience a much improved nasal airflow with the dilator. It does not fall out during sleep. She snores less with dilated nose but finds it unpleasant to have the dilator. She dislikes the sight of it in the mirror.

Finally I want to inform that the author himself has used the dilator every night for more than one year although he never snores or wakes up with a dry throat. When the nasal breathing is improved above normal your sleep is more restful and having experienced this you find that inserting a dilator into the nose every night is a small effort to enjoy a better sleep.

More scientific investigations about the value of a dilated nose are being performed and will be presented later.