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CME Objectives

After completing this CME activity, the psychiatrist should be able to:

- Differentiate between various types of sleep complaints
- Document the epidemiology of sleep medication and its clinical importance
- Analyze sleep-related problems, especially in the elderly

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Differences in Self-Reported Sleep Complaints in Elderly Persons Living in the Community Who Do or Do Not Take Sleep Medication

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Background: Sleep disorders and the use of sleep medication are major health issues. Since complaints about sleep disturbances are subjective phenomena, the aim of the present study was to investigate which sleep complaints and self-reported disturbances of sleep behavior are connected with the utilization of sleep medication.

Method: In the Berlin Aging Study, a random sample of 516 persons aged 70 to over 100 underwent extensive psychiatric and medical examinations including several medication assessments and a special interview on sleep complaints and sleep behavior.

Results: 19.1% of the elderly were taking some form of sleep medication. Univariate and discriminant analyses showed that neither self-reported duration of sleep time nor difficulties with sleeping through the night but complaints about difficulties initiating sleep and global complaints about disturbed sleep differentiated between those who do or do not take sleep medication.

Conclusion: Persons taking sleep medication nevertheless have a higher rate of sleep-related complaints than those who take no medication. Waking up in the night per se does not discriminate between drug users and controls. Instead, it is the inability to fall asleep or fall back into sleep after waking and global discontent with subjective sleep quality that make a difference.

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Sleep disturbances are widespread problems having an impact on subjective well-being as well as on objective health.[1–4] Epidemiologic studies report prevalence of sleep disturbances to be between 1.5% and 60% in the adult general population in developed countries.[1,2,5–18] This wide range can be partly explained by different methodological approaches regarding sampling techniques and type of population, as well as by different definitions of sleep disturbances. Many studies do not even use operationalized criteria to define sleep disturbances or insomnia.

Sleep quality is in the first place a subjective phenomenon, and its description can be heterogeneous. It is possible to describe reduced sleep quality in general terms like sleeplessness, poor sleep, disturbed sleep, insomnia, or too little sleep.[19–23] More specific complaints refer to special aspects of sleep, like difficulties initiating sleep or staying asleep, restless or unquiet sleep, or feelings of waking up tired and not being refreshed in the morning. In addition to such global or specific qualitative complaints about sleep, there are also quantitative descriptions of sleep behavior, such as self-reported length of total sleep time, time in bed, time taken to fall asleep, time spent lying awake during the night, and frequency of awaken-

ings. Those quantitative aspects can be easily compared with polysomnographic measures.

Self-reported sleep disturbances and self-reported sleep behavior reflect subjective suffering regarding sleep quality. It should be kept in mind that subjective complaints and polysomnographic recordings are complementary rather than competing methods.[23,24] It has been demonstrated for a sample of the elderly that disturbed sleep patterns according to polysomnographic assessment do not necessarily coincide with the subjective perception of disturbed sleep.[25] Therefore, subjective reports on disturbed sleep are important features in their own right.[20,24] They deserve special attention because they can cause the sufferer to seek help, to see a doctor, or to take sleep medication, be it prescription or over-the-counter hypnotics.[17,18,26]

Community-based studies show a high prevalence of sleep medication utilization. The rate in the general population for at least occasional sleep medication use is approximately 3% to 11%.[10,11,13–17,28] There are still higher rates for the elderly population ranging from 10% to 27%,[10,11,15,17,28] with a preponderance of long-term intake.[27,29] Sleep medications are mostly benzodiazepine hypnotics and tranquilizers. Although benzodiazepine prescription rates decreased in industrialized countries during the 1980s, there was during the same time a complementary increasing prescription rate of antidepressants, neuroleptics, and herbal preparations used as hypnotics.[30–32] In spite of this change in prescription habits, there seems to be a persistent demand for therapy in this field.

Many recommendations exist on the proper length to use sleep medication.[33] Nevertheless, it remains unresolved at which level of severity the treatment of insomnia should begin.[17,34] From this point of view, it can be helpful to take into account the aforementioned subjective complaints that lead to help-seeking. A better understanding of how complaints about sleep coincide with prescription and intake patterns can also help to interpret global pharmacoepidemiologic data.[29]

This study presents data from an epidemiologic sample of 516 persons aged 70 years and over living in the community. In this age group, the prevalence of sleep disturbances and/or the use of sleep medication is expected to be high. The aim was (1) to assess type and frequency of self-reported complaints of sleep and sleep behavior with the help of a multidimensional instrument, (2) to assess type and rate of sleep medication, and (3) to identify those aspects of self-reported sleep disturbances that are correlated with sleep medication utilization.

METHOD

Berlin Aging Study: Description of Sample and Sampling Technique

The Berlin Aging Study is a cross-sectional, in-depth multidisciplinary study on age and aging with special focus on very old age (≥ 70 years). The specialities involved in the study were sociology, psychology, psychiatry, and internal medicine, including dental medicine.[35]

The complete course of the study consisted of 13 or 14 intensive contacts, each lasting approximately 1 hour, including interviews about life course, social participation, social network, personality factors, intelligence and cognition, and subjective and objective health measures, along with a thorough medical and dental checkup done by research physicians, several blood chemistries, and a computed tomography scan of the skull. Within this context, the participants were also examined by research psychiatrists with the help of the Geriatric Mental State (GMS-A) and History and Aetiology Schedule-Interview (HAS) Package[36] to assess psychiatric morbidity.

Based on a random sample drawn from the West Berlin community register, 516 persons aged 70 years and over were included in the study. This sample has been stratified by age and gender so that six age groups (70–74, 75–79, 80–84, 85–89, 90–94, and ≥ 95 years) were formed. Each age group contained 43 men and 43 women, resulting in an oversampling of the very old and the male population. Of the sample, 14.2% lived in institutions for the elderly, 28.5% were living with a partner, 7.0% lived together with other persons in private residency, and 50.3% were living alone. After weighing and controlling for the stratified sampling, it could be shown that the weighted sample was representative for the West Berlin population aged 70 years and over (for further details, see references 37–39).

If the following comparisons are made between defined subpopulations, then these values are based on raw data of the study sample. If epidemiologic statements are made, then a correction is made for the oversampling in different age groups through weighing by age and gender so that resulting percentages refer to the general population over the age of 70.

Assessment of Sleep Problems and Sleep Medication

During the course of the study, questions related to sleep and medication had to be answered by the participants on different occasions. Research psychiatrists performed an interview designed to assess complaints and medication in relation to each other. Participants were

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Table 1. Variables and Instruments Used to Assess Sleep*

Variable Name	Questions	Comment/Coding of Answers	Instruments/Interviewer
Spontaneous sleep complaint	Did you have any complaints within the last 14 days?	Any complaint about disturbed sleep 0 = no sleep complaint mentioned 1 = sleep complaint mentioned	Structured interview assessing complaints and medication used by the participants within the last 14 days before the psychiatric interview (research psychiatrist)
Sleeping pill	Did you take any medication within the last 14 days?	Any drug to promote sleep regardless of the pharmacologic compound 0 = no sleeping pill use 1 = sleeping pill use	
Sleep rating-BL	I am suffering from sleeplessness.	Ratings from 0 to 3 0 = not at all 1 = seldom 2 = moderately 3 = strongly	BL-scale: Self-rating instrument assessing somatic and psychic complaints[40] (research assistant)
Sleep rating-CES-D	In the last week, I slept badly.	Ratings from 0 to 3 0 = not very much/not at all 1 = sometimes 2 = often 3 = mostly/all the time	CES-D scale/self-rating instrument assessing depressiveness[41] (research assistant)
Sleep rating-MOR	I am sometimes worrying that I cannot fall asleep.	Ratings from 0 to 4 0 = very much 4 = not at all	Revised version of Philadelphia Geriatric Center Morale Scale assessing global well-being[42] (research assistant)
Sleep disturbance/ falling asleep	Have you had any difficulty falling asleep?	0 = yes 1 = no	
Sleep disturbance/ staying asleep	Is your sleep interrupted during the night?	0 = no 1 = yes	GMS/A: Interview assessing psychiatric morbidity in the elderly within the last 4 weeks before the interview[36] (research psychiatrist)
Sleep disturbance/ early awakening	Have you recently been waking up early in the morning and found it impossible to get back to sleep?	0 = no 1 = yes	
Not enough sleep	Do you think you sleep enough?	0 = no 1 = sometimes 2 = always not enough sleep	Sleep behavior questionnaire[43] (research psychiatrist)
Duration of falling asleep more than 30 min	How long do you need to fall asleep?	0 = less than 30 min or varied 1 = usually 30 min or more	
Difficulty falling asleep	Do you find falling asleep takes you too long?	0 = no 1 = sometimes 2 = always difficult falling asleep	
Awakening during the night	Do you sleep through the night or do you wake up?	0 = sleep through 1 = awakening sometimes 2 = awakening usually	
Waking up more than twice	How many times do you wake up?	0 = two times or less 1 = more than twice	
Difficulty falling asleep again	If you wake up, do you find it difficult falling asleep again?	0 = don't wake up 1 = no difficulty 2 = difficulty falling asleep again	
Sleep restless	Is your sleep quiet or restless?	0 = no 1 = sometimes 2 = always restless	Sleep behavior questionnaire[43] (research psychiatrist)
Tired in the morning	Do you feel tired in the morning?	0 = no 1 = sometimes 2 = always tired	
Self-reported sleep duration	How many hours do you sleep at night on average?	_____ hours	
Daytime nap	Do you usually sleep during the day?	0 = no 1 = yes, daytime nap usually	
Global sleep rating	Are you satisfied with your sleep?	Ratings from 1 to 5 1 = very much 5 = not at all	

*Abbreviations: BL = Beschwerdeliste-scale, CES-D = Center for Epidemiological Studies Depression scale, GMS/A = Geriatric Mental State/AGECAT, MOR = Philadelphia Geriatric Center Morale scale.

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asked for their views on the purpose or indication they took each medication. Medication intake was also assessed by the internists. Furthermore, pill boxes were inspected at the homes of the participants, and the family physicians were asked for the subjects' prescriptions. We chose a period of 14 days for reporting the use of any medication. It was felt necessary to restrict this interval because we were interested in the present medication and because we wanted to avoid memory-dependent reporting errors.

A special questionnaire was given to assess sleep complaints and behavior. Sleep-related questions also appeared in several of the other assessment instruments. Self-rating instruments were applied by research assistants on separate days. For the convenience of the reader, the phrasing of the questions, the coding of the answers, and the sources are shown in Table 1.

Statistics

We divided the sample into 2 groups. The first group comprised 98 participants (19% of the sample) who reported having taken some medication to help them sleep during the last 14 days before the psychiatric interview, regardless of the pharmacologic compound, the frequency, or duration of intake. The second group (N = 418) contained those participants who did not report having taken medication for this purpose.

In the first step, we compared both groups using chi-square statistics or t tests to give information on frequencies of different sleep problems in each group. Statistical significance was assumed at the p = .05 level. In a second step, we conducted a discriminant analysis with the grouping variable of "sleep medication use" to identify the most powerful variables in subjective sleep complaints and subjective sleep behavior that separate both groups. All statistics were calculated with the help of the Statistical Package for the Social Sciences PC+ version 4.0 (SPSS. Chicago, Ill.).

RESULTS

Nineteen percent of the participants (N = 98) reported having taken some medication to influence sleep quality during the 14 days prior to the interview. After correction for the stratified sampling through weighing by age, the percentage of persons taking sleep medication was 19.1%, and after weighing for age and gender, it increased to 22.4% because medication use is not related to age but to some degree to gender. Table 2 shows that 58.2% of those who use sleep medication took benzodiazepines. About two thirds of the drugs were prescribed and one third of the subjects were self-medicating. Medication was continuously taken for a mean ± SD of 87.2 ± 127.5 months (median = 48.0) and for 9.0 ± 5.5 days within a 2-week period (median = 14.0).

Table 2. Sleep Medication Used in a Sample of 516 Subjects ≥ 70 Years*

Type of Drug Class[a]	% of Population	Participants Taking Sleep Medication N = 98	Participants Taking Sleep Medication %
Benzodiazepines	10.5	57	58.2
Over-the-counter hypnotics/ other hypnotics[b]	3.1	13	13.3
Herbal preparations[c]	3.6	17	17.3
Antidepressants/ neuroleptics	0.7	7	7.1
Other medication[d]	2.8	12	12.2

Prescriber[e]	Drugs	%
Physician	68	63.0
Self-prescribed	37	34.3
Prescriber unknown	3	2.8

*Sleep medication is, in the view of the participants, any medication taken within the last 14 days before the psychiatric interview to promote sleep.
[a]Some participants took more than 1 sleep medication (90 took 1, 6 took 2, and 2 took 3 drugs). This meant that 98 participants used 108 drugs.
[b]Nonbenzodiazepine hypnotics such as diphenhydramine or barbiturates.
[c]Herbal preparations such as valeriana extracts.
[d]Other medication not especially designed for sleep improvement such as aspirin.
[e]Prescribers for each of the 108 drugs.

The comparison of sleep medication users and nonusers shows that users of sleep medication report complaints and negative judgments about sleep to a higher degree than nonusers (Table 3). The difference between both groups is significant for the majority of the items. No difference was shown in the items "not enough sleep," "tired in the morning," "daytime nap," and self-reported sleep duration. Two thirds of the users of sleep medication spontaneously report sleep complaints when asked for complaints in general and also when asked directly about sleeplessness or poor sleep as compared with 9% of nonusers. Eighty-one percent of the users of sleep medication complained about difficulties falling asleep and 67% about difficulties staying asleep within the last month. These complaints are significantly (p < .001) less frequent in nonusers of sleep medication. In both groups, nightly awakening was a frequent phenomenon (85% for users, 73% for nonusers); still, a greater percentage of users of sleep medication complained about difficulties

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Table 3. Self-Reported Sleep Disturbances and Self-Reported Sleep Behavior: Comparison Between Users of Sleep Medication and Nonusers*

	Use of Sleep Medication (N = 98)		No Use of Sleep Medication (N = 418)		
Disturbance/Behavior	%	N	%	N	p Value
Spontaneous sleep complaint	66.3	65	9.1	38	< .001
Sleep rating-BL (rating 2 and 3)	63.2	62	29.9	115	< .001
Sleep rating-CES (N = 512) (rating 2 and 3)	35.7	35	17.2	71	< .001
Sleep rating-MOR (rating 1 and 2)	33.6	33	17.7	74	< .001
Sleep disturbance/ falling asleep	80.6	79	21.8	91	< .001
Sleep disturbance/ staying asleep	67.3	66	32.3	135	< .001
Sleep disturbance/ early awakening	18.4	18	7.2	30	< .001
Not enough sleep	18.4	18	12.9	54	NS
Falling asleep more than 30 minutes	26.5	26	17.2	72	< .05
Difficulty falling asleep	30.6	30	14.8	62	< .001
Awaking during the night (N = 512)	84.7	83	72.7	301	< .05
Waking up more than twice	36.7	36	26.1	109	< .05
Difficulty falling asleep again	41.8	41	22.5	95	< .001
Sleep restless	21.4	21	12.7	53	< .05
Tired in the morning	17.3	17	13.6	57	NS
Daytime naps	38.8	38	46.9	196	NS
	Mean	SD	Mean	SD	
Self-reported sleep duration/h (N = 456)	6.9	2.1	7.2	1.8	NS
Global sleep rating (N = 512)	3.3	1.0	2.6	1.1	< .001

*Chi-square analysis.

falling asleep again after waking up during the night (Table 3).

To estimate which aspect of subjective sleep disturbance contributed most to the discrimination between users and nonusers of sleep medication, a multivariate discriminant analysis that included all variables from Table 3 was done. Results showed that items reflecting global suffering or global judgments about sleep disturbances were the ones that contributed most to the discrimination between the 2 groups rather than the items that describe sleep behavior (Table 4).

The items derived from the 3 self-rating scales also contributed significantly ($p < .000$) to explaining the use of sleep medication. In addition, these items reflect global aspects of sleep disturbance. It is noteworthy to remember that these items were asked by research assistants some weeks before the psychiatric interview. This speaks for the validity and stability of the assessment. On the other hand, it also suggests that complaints about sleep were chronic phenomena in users of sleep medication. Among the more specific aspects of sleep disturbances, difficulties with initiating sleep (items "sleep disturbance/falling asleep," "difficulty falling asleep," and "difficulty falling asleep again") can be contrasted with "awakening during the night" and "waking up more than twice," suggesting that the inability to fall asleep or fall back into sleep after waking up makes a difference between users and nonusers of sleep medication, but not waking up per se.

DISCUSSION

To our knowledge, this is the first attempt to study different aspects of subjective complaints about sleep in relation to the utilization of sleep medication. Results show that users of sleep medication complain to a greater degree about disturbed sleep than nonusers. On the one side, global complaints, and on the other side, more specific problems with falling asleep differentiate both groups better than do difficulties with staying asleep. Waking up several times in the night in order to go to the toilet does not discriminate between users and nonusers of sleep medication. It is, rather, the inability to initiate or go back to sleep. At first glance, this conclusion seems to contradict findings that staying asleep is the problem that is most prevalent in sleep-disturbed elderly persons.[1,21,27,44] As mentioned earlier, the fact of awakening during the night does not necessarily coincide with the complaint of sleep disturbance in elderly people, as long as it is possible for them to fall asleep again immediately, as might be the case with nocturia.[45]

The increased rate of complaints about sleep by users as compared with nonusers of sleep medication can have several explanations. It might well be that therapy with sleep medication is effective but not to the degree of a complete recovery from sleep problems. Engel and Engel-Sittenfeld,[26] in their sample of chronically insomniac patients, observed that those who did not take sleep medication showed shorter self-reported sleep duration and a longer sleep latency than insomniacs who regularly took sleep medication. These findings suggest that sleep-disturbed patients benefit from a regular intake of sleep medication. The great majority of those patients were convinced of the beneficial action of their sleep medication.[26]

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Table 4. Discriminant Analysis: Use of Sleep Medication Within the Last 14 Days*

Discriminating Variable	Wilks' Lambda	F Value	Significance of F Value	Standardized Canonical Discriminant Function Coefficient	Correlation[a]
Global complaints					
Spontaneous sleep complaint	0.684	207.7	0.000	0.796	0.752
Sleep rating-BL	0.902	49.0	0.000	0.164	0.365
Sleep rating-CES	0.957	20.3	0.000	–0.012	0.235
Sleep rating-MOR	0.957	20.1	0.000	–0.061	–0.234
Not enough sleep	0.996	1.8	0.176	–0.253	0.071
Global sleep rating	0.938	29.8	0.000	0.009	0.285
Specific sleep disturbance					
Sleep disturbance falling asleep	0.754	146.6	0.000	0.670	0.632
Sleep disturbance staying asleep	0.922	37.8	0.000	–0.037	0.321
Sleep disturbance early awakening	0.979	9.5	0.002	–0.035	0.161
Falling asleep takes more than 30 minutes	0.992	3.4	0.065	–0.073	0.096
Difficulty falling asleep	0.963	17.5	0.000	–0.199	0.218
Awakening during the night	0.994	2.8	0.092	0.049	0.088
Waking up more than twice	0.998	0.8	0.382	–0.020	0.046
Difficulty falling asleep again	0.983	7.8	0.005	–0.076	0.146
Sleep restless	0.993	3.4	0.067	–0.044	0.096
Tired in the morning	0.999	0.5	0.486	–0.162	0.036
Daytime nap	0.989	5.0	0.258	–0.151	–0.117
Self-reported sleep duration	0.997	1.6	0.211	0.149	–0.065

*451 cases were used for this procedure; 87.2% could be grouped correctly.
[a]Correlation between discriminating variables and Canonical Discriminant Functions.

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Similarly, Balter and Uhlenhuth[46] found that a great proportion of insomniac users of sleep medication felt positive effects and would take their medication again. Simen et al.[17] reported that patients who took sleep medication on a daily basis had fewer sleep problems than the ones who took sleep medication on an as needed basis. On the other side, Hohagen et al.[9] reported that only 22% of severely insomniac patients of a sample of general practitioners felt a considerable improvement by taking hypnotics, and results from Simen et al.[17] also show that 45% of patients were still suffering from their sleep problem despite daily administration of sleep medication. Foley et al.[1] reported that, in their sample, the use of anxiolytic medication was associated with a 2-fold increase in the odds for insomnia, a finding comparable to ours.

Another explanation for the insufficient sleep quality in users of sleep medication may lie with sleep medication itself. In a study by Seppälä,[44] more users of sleep medication felt more tired during the day than nonusers, which could be explained as an unwanted side effect of the sleep medication. Another important fact comes from laboratory findings. Chronic hypnotic drug use alters sleep quality substantially and produces the need to continue medication to overcome rebound insomnia.[47–49] This fact might be very important for our sample since there seems to be a tendency for long-term and regular or daily use (Table 2). Pharmacologically impaired sleep quality could also explain why some persons who try to sleep, but fail to fall asleep or wake up again, subsequently continue to take sleep medication.

Finally, a psychological explanation for sleep medication intake can be proposed. Sleep disturbances are mostly chronic health problems. The experience of chronic suffering leads to a low expectation in drug effects but coincides with the desire not to miss even the smallest positive effects.[50–52] This desire can explain why patients taking benzodiazepines continue the medication, especially when they do not experience any acute negative effects.[17,46,53]

Our aim was not to compare medicated and unmedicated insomniacs. Instead, we chose to compare those who use sleep medication and are assumed to have at least some reason to do so and those who do not use sleep medication, because we wanted to explore the associated sleep complaints. We cannot tell from our cross-sectional data whether the worse sleep quality of those who use sleep medication is the reason for or the result of sleep medication. We can say that besides global complaints, the inability to initiate sleep seems to be the most distressing factor of sleep disturbance that is associated

with the utilization of sleep medication intake. Any alternative treatment strategy has to deal with this problem. In any case, it seems important to pay proper attention to individual complaints of patients and how they are expressed.

Drug name: diphenhydramine (Benadryl and others).

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DISCLOSURE OF OFF-LABEL USAGE

The following agents mentioned in this article are *not* indicated for treatment of insomnia without detailed specification: antidepressants, herbal drugs, and neuroleptics.

CME

COMING NEXT MONTH

DSM-IV Intermittent Explosive Disorder: A Report of 27 Cases

Susan L. McElroy, Cesar A. Soutullo, DeAnna A. Beckman, Purcell Taylor, Jr., and Paul E. Keck, Jr.

Instructions

Psychiatrists may receive 1 hour of Category 1 credit toward the American Medical Association Physician's Recognition Award by reading the article starting on page 137 and correctly answering at least 70% of the questions in the quiz that follows.

1. Read each question carefully and circle the correct corresponding answer on the Registration form.
2. Type or print your full name, address, phone number, and fax number in the spaces provided.
3. Mail the Registration form along with a check, money order, or credit card payment in the amount of $10 to: Physicians Postgraduate Press, Office of CME, P.O. Box 752870, Memphis, TN 38175-2870.
4. For credit to be received, answers must be postmarked by the deadline shown on the CME Registration form. After that date, correct answers to the quiz will be printed in the next issue of the *Journal*.

All replies and results are confidential. Answer sheets, once graded, will not be returned. Unanswered questions will be considered incorrect and so scored. Your exact score can be ascertained by comparing your answers with the correct answers to the quiz, which will be printed in the *Journal* issue after the submission deadline. The Physicians Postgraduate Press Office of Continuing Medical Education will keep only a record of participation, which indicates the completion of the activity and the designated number of Category 1 credit hours that have been awarded.

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1. Which of the following sleep problems does not discriminate between persons who use and do not use sleep medication?
a. Difficulties falling asleep
b. Waking up more than twice during the night
c. Early awakening
d. Falling asleep again after awakening
e. Global discontent with sleep

2. What is the approximate rate of persons in the general population currently taking sleep medication?
a. 1 per 1000
b. 1 per 100
c. 1 per 10
d. 1 per 5
e. More than 1 per 5

3. What is the approximate rate of persons beyond the age of 70 in the general population currently taking sleep medication?
a. 1 per 1000
b. 1 per 100
c. 1 per 10
d. 1 per 5
e. More than 1 per 5

4. Which class of psychotropic drugs is at present most often used because of sleep problems in the elderly?
a. Benzodiazepines
b. Herbal drugs
c. Sedative tricyclic antidepressants
d. Sedative major tranquilizers
e. Barbiturates

5. Approximately what percentage of sleep medications in the elderly is self-prescribed?
a. 1%
b. 10%
c. 33%
d. 66%
e. 90%

6. Sleep in elderly persons currently taking sleep medication as compared to nonusers is:
a. Totally undisturbed
b. Better
c. Same
d. Worse
e. Totally sleepless

Answers to the September 1997 CME quiz

1. d 2. e 3. d 4. e 5. e 6. e 7. d

Circle the one correct answer for each question.

1.	a	b	c	d	e
2.	a	b	c	d	e
3.	a	b	c	d	e
4.	a	b	c	d	e
5.	a	b	c	d	e
6.	a	b	c	d	e

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1. Overall quality of this CME activity ____
2. Content ____
3. Format ____
4. Faculty ____
5. Achievement of educational objectives:
   - A. Enabled the reader to differentiate between various types of sleep complaints. ____
   - B. Enabled the reader to document the epidemiology of sleep medication and its clinical importance. ____
   - C. Enabled the reader to analyze sleep-related problems, especially in the elderly. ____
6. This CME activity provided a balanced, scientifically rigorous presentation of therapeutic options related to the topic, without commercial bias. ____
7. Please comment on the impact that this CME activity might have on your management of patients.

   _____
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8. Please offer additional comments and/or suggested topics for future CME activities.

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