

Nicotine Dependence Rises Among U.S. Smokers

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PHILADELPHIA — American smokers have become significantly more nicotine dependent since 1989, Dr. David P. L. Sachs said at the annual meeting of the American College of Chest Physicians.

Dr. Sachs, director of the Palo Alto (Calif.) Center for Pulmonary Disease Prevention, documented this shift by comparing the average level of nicotine dependence in patients in three smoking-cessation studies between 1989 and 2006.

Findings from a number of studies have shown that in patients with rheumatoid arthritis (RA), smoking worsens disease severity, especially in women; speeds radiographic RA progression; and contributes to RA-associated lung complications.

In all three studies, nicotine dependence at baseline was quantified with the Fagerström Tolerance Questionnaire (FTQ), a brief, self-report survey that measures nicotine dependence on a scale of 0-10, with 10 being the highest level of dependence. (Until 1991, the scale was 0-11.)

Among 220 U.S. smokers enrolled in 1989 and 1990 in a study of a nicotine patch, the average FTQ score was 6.65. The next study enrolled 206 patients in 1994 in a study of sustained-release bupropion; their average FTQ score was 7.02, significantly higher than in the prior study. This average also fell into the category of "high" nicotine dependence, which applies to FTQ scores of 7 or greater.

The third study group cited by Dr. Sachs included 204 patients enrolled in 2005-2006 to assess an individualized treatment regi-

men. These people had an average FTQ score of 7.44, a significant jump from 1994.

The percentage of patients rated as highly nicotine dependent, with an FTQ score of 7 or higher, was 56% in 1989-1990, 66% in 1994, and 73% in 2005-2006.

Measuring the FTQ score for each prospective quitter is crucial. "It would be like trying to manage hypertension without first measuring a patient's blood pressure." If the smoker is highly dependent, with an FTQ score of 9 or 10, three or more

standard, OTC nicotine patches worn simultaneously will probably be necessary. The patients also will need to have an additional nicotine source for times of stress, such as nicotine gum, nasal spray, an inhaler, or lozenges.

In addition, highly dependent patients will likely need treatment with sustained- or extended-release bupropion (Zyban). Another effective smoking-cessation drug is varenicline (Chantix).

The key to treating high dependence is

individualizing treatment and finding a regimen that consistently controls a patient's urge to smoke, he explained. The next step is sticking with the regimen, and then cautiously tapering it down.

Dr. Sachs has received research grants from, has consulted for, and has been a speaker for, Pfizer (maker of Chantix), and GlaxoSmithKline (maker of Zyban), as well as other drug companies. An interview with Dr. Sachs is at www.youtube.com/RheumatologyNews. ■

The Fagerström Questionnaire

1. How soon after you wake up do you smoke your first cigarette?

- a. Within 5 minutes: 3 points.
- b. 6-30 minutes: 2 points.
- c. 31-60 minutes: 1 point.
- d. After 60 minutes: 0 points.

2. Do you find it difficult to refrain from smoking in places where it is forbidden, e.g., church, library?

Yes: 1 point. No: 0 points.

3. Which cigarette would you hate most to give up?

- a. The first in the morning: 1 point.
- b. Any other: 0 points.

4. How many cigarettes per day?

- a. 31 or more: 3 points.
- b. 21-30: 2 points.
- c. 11-20: 1 point.
- d. 10 or less: 0 points.

5. Do you smoke more frequently during the first hours after awakening than during the rest of the day?

Yes: 1 point. No: 0 points.

6. Do you smoke when you are so ill that you are in bed most of the day? (If you never get sick, give the most likely response.)

Yes: 1 point. No: 0 points.

Source: Br. J. Addict. 1991;86:1119-27



1. Wortmann RL, Kelley WN. Gout and hyperuricemia. In: Harris ED Jr, Budd RC, Genovese MC, et al, eds. *Kelley's Textbook of Rheumatology*. 7th ed. Philadelphia, Pa: Elsevier Saunders; 2005:1402-1429. 2. Emmerson BT. The management of gout. In: Hochberg MC, Silman AJ, Smolen JS, Weinblatt MR, Weisman MH, eds. *Rheumatology*. 3rd ed. Edinburgh: Mosby; 2003:1929-1936.