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Priority Updates from the Research Literature from the Family Physicians Inquiries Network

"Cold turkey" works best for smoking cessation

Counsel patients who want to quit smoking that doing so abruptly leads to higher cessation rates than does quitting gradually.

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PRACTICE CHANGER

Counsel patients who want to quit smoking that abrupt smoking cessation is more effective for long-term abstinence than taking a gradual approach.

STRENGTH OF RECOMMENDATION

B: Based on one well-designed, randomized controlled trial.

Lindson-Hawley N, Banting M, West R, et al. Gradual versus abrupt smoking cessation: a randomized, controlled noninferiority trial. *Ann Intern Med.* 2016;164:585-592.[1]

ILLUSTRATIVE CASE

A 43-year-old man has a 35-pack-year smoking history and currently smokes a pack of cigarettes a day. He is eager to quit smoking after recently learning that a close friend of his has been diagnosed with lung cancer. He asks you whether he should quit "cold turkey" or gradually. What would you recommend?

Between 2013 and 2014, one in 5 American adults reported using tobacco products some days or every day, and 66% of smokers in 2013 made at least one attempt to quit.[2,3] The risks of tobacco use and the benefits of cessation are well established, and behavioral and pharmacologic interventions both alone and in combination increase smoking cessation rates.[4] The US Preventive Services Task Force recommends that health care providers address tobacco use and cessation with patients at regular office visits and offer behavioral and pharmacologic interventions.[5] Current guidelines, however, make no specific recommendations regarding gradual vs abrupt smoking cessation methods.[5]

A previous Cochrane review of 10 randomized controlled trials demonstrated no significant difference in quit rates between gradual cigarette reduction leading up to a designated quit day and abrupt cessation. The meta-analysis was limited, however, by differences in patient populations, outcome definitions, and types of interventions (both pharmacologic and behavioral).[6]

In a retrospective cohort study, French investigators reviewed an online database of 62,508 smokers who presented to nationwide cessation services. The researchers found that older participants (≥45 years of age) and heavy smokers (≥21 cigarettes/d) were more likely to quit gradually than abruptly.[7]

STUDY SUMMARY

Quitting "cold turkey" is better than gradual cessation at 6 months

Lindson-Hawley, et al, conducted a randomized, controlled, non-inferiority trial in England to assess if gradual cessation is as successful as abrupt cessation as a means of quitting smoking.[1] The primary outcome was abstinence from smoking at 4 weeks, assessed using the Russell Standard, a set of 6 standard criteria (including validation by exhaled carbon monoxide concentrations of <10 ppm) used by the National Centre for Smoking Cessation and Training to decrease variability of

reported smoking cessation rates in English studies.[8]

Study participants were recruited via letters from their primary care practice inviting them to call the researchers if they were interested in participating in a smoking cessation study. Almost 1100 people inquired about the study. In the end, 697 were randomized to either the abrupt-cessation group (n=355) or the gradual-cessation group (n=342). Baseline characteristics between the 2 groups were similar.

All participants were asked to schedule a quit date for 2 weeks after their enrollment. Patients randomized to the gradual-cessation group were provided nicotine replacement patches (21 mg/d) and their choice of short-acting nicotine replacement therapy (NRT) (gum, lozenges, nasal spray, sublingual tablets, inhalator, or mouth spray) to use in the 2 weeks leading up to the quit date, along with instructions to reduce smoking by half of the baseline amount by the end of the first week, and to a quarter of baseline by the end of the second week.

Patients randomized to the abrupt-cessation group were instructed to continue their current smoking habits until the cessation date; during those 2 weeks they were given nicotine patches (because the other group received them and some evidence suggests that precessation NRT increases quit rates), but no short-acting NRT.

Following the cessation date, treatment in both groups was identical, including behavioral support, 21 mg/d nicotine patches, and the participant's choice of short-acting NRT. Behavioral support consisted of visits with a research nurse at the patient's primary care practice weekly for 2 weeks before the quit date, the day before the quit date, weekly for 4 weeks after the quit date, and 8 weeks after the quit date.

The chosen non-inferiority margin was equal to a relative risk (RR) of 0.81 (19% reduction in effectiveness) of quitting gradually compared with abrupt cessation of smoking. Quit rates in the gradual-reduction group did not reach the threshold for non-inferiority; in fact, 4-week abstinence was significantly more likely in the abrupt-cessation group (49%) than in the gradual-cessation group (39.2%) (RR=0.80; 95% confidence interval [CI], 0.66-0.93; number needed to treat [NNT]=10). Similarly, secondary outcomes of 8-week and 6-month abstinence rates showed superiority of abrupt over gradual cessation. At 6 months after the quit date, 15.5% of the gradual-cessation group and 22% of the abrupt-cessation group remained abstinent (RR=0.71; 95% CI, 0.46-0.91; NNT=15).

Patients' preferred method of cessation plays a role

The investigators also found a difference in successful cessation based on the participants preferred method of cessation. Participants who preferred abrupt cessation were more likely to be abstinent at 4 weeks than participants who preferred gradual cessation (52.2% vs 38.3%; *P*=.007).

Patients with a baseline preference for gradual cessation were equally as likely to successfully quit when allocated to abrupt cessation against their preference as when they were allocated to gradual cessation: 4-week abstinence was seen in 34.6% of patients who preferred gradual cessation and were allocated to gradual cessation and in 42% of patients who preferred gradual cessation but were allocated to abrupt cessation (*P*=.152).

People who prefer gradual cessation are less likely to be successful at quitting—regardless of whether they try to quit abruptly or gradually.

WHAT'S NEW

Higher quality than previous studies and added element of preference

This large, well-designed, non-inferiority study showed that abrupt cessation is superior to gradual cessation. The size and design of the study, including a standardized method of assessing cessation and a standardized intervention, make this a higher quality study than those in the Cochrane meta-analysis.[6] This study also showed that participants who preferred gradual cessation were less likely to be successful—regardless of the method to which they were ultimately randomized.

CAVEATS

Generalizability limited by race and number of cigarettes smoked

Patients lost to follow-up at 4 weeks (35 in

the abrupt-cessation group and 48 in the gradual-cessation group) were assumed to have continued smoking, which may have biased the results toward abrupt cessation. That said, the large number of participants included in the study, along with the relatively small number of patients lost to follow-up, minimizes this weakness.

The participants were largely white, which may limit generalizability to non-white populations. In addition, participants smoked an average of 20 cigarettes per day and, as noted previously, an observational study of tobacco users in France found that heavy smokers (≥21 cigarettes/d) were more likely to quit gradually than abruptly, so results may not be generalizable to heavy smokers.[7]

CHALLENGES TO IMPLEMENTATION

Finding the time and staff for considerable behavioral support

One important challenge is the implementation of such a structured tobacco cessation program in primary care. Both abrupt- and gradual-cessation groups were given considerable behavioral support from research nurses. Participants in this study were seen by a nurse 7 times in the first 6 weeks of the study, and the intervention included nurse-created reduction schedules.

Even if patients in the study preferred one method of cessation to another, they were receptive to quitting either gradually or abruptly. In clinical practice, patients are often set in their desired method of cessation. In that setting, our role is then to inform them of the data and support them in whatever method they choose. **JFP**

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