"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

Abrupt smoking cessation is more effective for long-term abstinence than a gradual approach.

STRENGTH OF RECOMMENDATION

B: Based on one well-designed, randomized controlled trial (RCT).[1]

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

Between 2013 and 2014, one in five 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 versus abrupt smoking cessation methods.[5]

A previous Cochrane review of 10 RCTs demonstrated no significant difference in quit rates between gradual cigarette reduction 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 more than 60,000 smokers who presented to nationwide cessation services. The researchers found that older participants (those 45 and older) and heavy smokers (≥ 21 cigarettes/d) were more likely to quit gradually than abruptly.[7]

STUDY SUMMARY

"Cold turkey" is better than gradual cessation at six months

A noninferiority RCT was conducted in England to assess whether gradual smoking cessation is as successful as abrupt cessation.[1] The primary outcome was abstinence from smoking at four weeks, assessed using the Russell Standard. This set of six criteria (including validation by exhaled CO concentrations of < 10 ppm) is used by the National Centre for Smoking Cessation and Training to decrease variability of reported smoking cessation rates in English studies.[8]

Participants were recruited via letters from their primary care practice inviting them to participate in a smoking cessation study. The 697 subjects were randomized to either the abrupt-cessation group or the gradual-cessation group. Baseline characteristics were similar between groups.

All participants were asked to schedule a quit date for two weeks after their enrollment. Patients assigned to the gradual-cessation group were provided nicotine replacement patches (21 mg/d) and their choice of short-acting nicotine replacement

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therapy (NRT; gum, lozenges, nasal spray, sublingual tablets, inhalator, or mouth spray) to use in the two weeks leading up to the quit date. They were given 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 randomly assigned to the abrupt-cessation group were instructed to continue their current smoking habits until the cessation date; during those two 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, nicotine patches (21 mg/d), and the patient's choice of short-acting NRT. Behavioral support consisted of visits with a research nurse at the patient's primary care practice at the following intervals: weekly for two weeks before the quit date; the day before the quit date; weekly for four weeks after the quit date; and eight weeks after the quit date.

The chosen noninferiority 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 noninferiority; in fact, four-week abstinence was significantly more likely in the abrupt-cessation group than in the gradual-cessation group (49% vs 39.2%; RR, 0.80; number needed to treat [NNT], 10). Similarly, secondary outcomes of eight-week and six-month abstinence rates showed superiority of abrupt over gradual cessation. Six months after the quit date, 15.5% of the gradual-cessation group and 22% of the abrupt-cessation group remained abstinent (RR, 0.71; NNT, 15).

Patient preference 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 four weeks than participants who preferred gradual cessation (52.2% vs 38.3%).

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. Four-week abstinence was seen in 34.6% of patients who preferred and were allocated to gradual cessation and in 42% of patients who preferred gradual but were allocated to abrupt cessation.

WHAT'S NEW

Higher quality study; added element of preference

This large, well-designed, noninferiority 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 assigned.

CAVEATS

Generalizability limited by race and number of cigarettes smoked

Patients lost to follow-up at four 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 study participants, along with the relatively small number lost to follow-up, minimizes this weakness.

The majority of participants were white, which may limit generalizability to nonwhite 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. Therefore, results may not be generalizable to heavy smokers.[7]

CHALLENGES TO IMPLEMENTATION

Considerable investment in behavioral support

One significant 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 seven times in the first six 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. **CR**

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