ASHES, Vol. 7(7) – What's the best way to quit smoking?

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Many smoking cessation programs recommend abrupt (i.e., "cold turkey") versus gradual smoking cessation (Fiore et al., 2008; West et al., 2000). However, most heavy smokers attempt the latter approach (Levinson, Shapiro, Schwartz, & Tursky, 1971; Shiffman, Ferguson, & Strahs, 2009). This week, ASHES reports on a large randomized control study that compares gradual versus abrupt versus minimal treatment smoking cessation approaches (Hughes, Solomon, Livingston, Callas, & Peters, 2010).

Methods

Participants

- The researchers recruited 746 adult daily smokers (48% women, 91% Caucasians) through newspaper and radio ads. Participants smoked at least 15 cigarettes per day, wanted to quit smoking during the next 30 days, were willing to use nicotine lozenges, and preferred to quit gradually rather than abruptly. The researchers randomly assigned participants to the gradual (N = 297), abrupt (N = 299), or minimal treatment (N = 150) conditions

Procedure

- All participants set a quit day during the first session
- Gradual cessation condition. Throughout a pre-quit period the researchers mailed participants nicotine lozenges. Participants also received 4 calls from a counselor during the pre-quit period and and 1 call after. The researchers recommended participants to reduce by 25% during the first week, 50% during the second week, and 75% during the third week.
- Abrupt cessation condition. Participants received 2 calls before the quit day and three calls after. They received lozenges after the quit day. Participants were instructed not to change their cigarettes per day until the quit day.
- Minimal treatment condition. Participants received 1 call before the quit

day and 1 call and the lozenges after the quit day. Participants were encouraged to set a quit date during the first call.

Assessments

- At baseline, participants indicated their smoking dependence on a visual analog scale from low to high and self-efficacy to quit smoking on a Velicer's scale (Velicer et al., 1990) .
- A research assistant obtained a breath carbon monoxide (CO) level at study entry, immediately before the quit day, and at 6 month follow up from those who reported abstinence. The research assistant also called participants 2 weeks, 4 weeks, 6 weeks, 3 month and 6 months after to inquire about reduction and non-reduction.

Results

- Table 1 indicates that participants in all three conditions demonstrated the same rate of abstinence at 6-month follow-up ($p > .05$).
- Smokers who rated themselves as low dependent had a longer time-to-lapse; however, smokers who rated higher dependence demonstrated the same time to relapse in abrupt and gradual conditions ($\chi^2 = 3.91$, $p < .05$).
- Smokers with high self-efficacy did better (i.e., demonstrated longer time to lapse) in the abrupt condition. However, smokers with low self-efficacy demonstrated the same results in both conditions ($\chi^2 = 4.98$, $p < .05$).

	Gradual N = 227	Abrupt N = 237	Minimal treatment N = 118	Odd ratio gradual vs abrupt
6 month self-report	9	13	12	.7
6-month CO-verified	4	7	5	.6

Figure. Percent of abstinence

Limitations

- The results of self-reported abstinence did not agree with the CO test results in about half cases. This challenges validity of the self-reports in the study (Hughes, et al., 2010).

- The conditions varied in several ways other than reduction vs. abrupt. For example, the gradual condition received more pre-cessation calls and fewer post-cessation calls than the abrupt condition.

Conclusion

The study demonstrated that for those smokers who prefer to reduce number f cigarettes and then quit, the gradual smoking cessation method works the same as the abrupt method, particularly in the time-to-lapse measure and for those with low self-efficient and high smoking dependence. Due to overall popularity of the gradual cessation method among smokers, more studies should be done to investigate and improve its effectiveness.

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References

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