

nificant limitations and potential biases, concluded that relatively brief preoperative abstinence from smoking (less than 8 weeks) does not increase pulmonary risk compared with continued smoking.<sup>8</sup> Indeed, we are not aware of any individual study that has found a statistically significant increase in pulmonary complications with brief preoperative abstinence, including the two initial studies by Warner *et al.* that were interpreted by some authors as raising concerns.<sup>9,10</sup> The conjectured mechanism responsible for increased risk is a transient increase in cough and sputum production after smoking cessation. However, there is no evidence that cough and sputum production actually increase after smoking cessation, either in an ambulatory population<sup>11</sup> or specifically in anesthetized patients.<sup>12</sup> It does seem clear that more prolonged abstinence from smoking is necessary to reduce the risk of pulmonary morbidity because it takes several weeks for the lungs to recover from the effects of smoking.<sup>13</sup>

Thus, although more data would be welcome, we do not believe that there is any evidence to support the possibility that short-term smoking cessation increases pulmonary complications. It is very likely that the longer the duration of abstinence the better in terms of reducing risk of pulmonary and other complications. However, given the power of the teachable moment and the long-term benefits to health, anesthesiologists and others should seize any opportunity at any time to help their patients quit smoking, without fearing that brief preoperative abstinence could worsen outcome. The American Society of Anesthesiologists provides several tools to do so.\*

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## References

1. Turan A, Mascha EJ, Roberman D, Turner PL, You J, Kurz A, Sessler DI, Saager L: Smoking and perioperative outcomes. *ANESTHESIOLOGY* 2011; 114:837–46
2. Katznelson R, Beattie WS: Perioperative smoking risk. *ANESTHESIOLOGY* 2011; 114:734–6
3. Shi Y, Warner DO: Surgery as a teachable moment for smoking cessation. *ANESTHESIOLOGY* 2010; 112:102–7
4. Nsell H, Adami J, Samnegrd E, Tnnesen H, Ponzer S: Effect of smoking cessation intervention on results of acute fracture surgery: A randomized controlled trial. *J Bone Joint Surg Am* 2010; 92:1335–42
5. Warner DO, Patten CA, Ames SC, Offord K, Schroeder D: Smoking behavior and perceived stress in cigarette smokers undergoing elective surgery. *ANESTHESIOLOGY* 2004; 100:1125–37
6. Bluman LG, Mosca L, Newman N, Simon DG: Preoperative smoking habits and postoperative pulmonary complications. *Chest* 1998; 113:883–9
7. Nakagawa M, Tanaka H, Tsukuma H, Kishi Y: Relationship between the duration of the preoperative smoke-free period and the incidence of postoperative pulmonary complications after pulmonary surgery. *Chest* 2001; 120:705–10
8. Myers K, Hajek P, Hinds C, McRobbie H: Stopping smoking shortly before surgery and postoperative complications: A systematic review and meta-analysis. *Arch Intern Med* 2011; 171:983–9
9. Warner MA, Divertie MB, Tinker JH: Preoperative cessation of smoking and pulmonary complications in coronary artery bypass patients. *ANESTHESIOLOGY* 1984; 60:380–3
10. Warner MA, Offord KP, Warner ME, Lennon RL, Conover MA, Jansson-Schumacher U: Role of preoperative cessation of smoking and other factors in postoperative pulmonary complications: A blinded prospective study of coronary artery bypass patients. *Mayo Clin Proc* 1989; 64:609–16
11. Warner DO, Colligan RC, Hurt RD, Croghan IT, Schroeder DR: Cough following initiation of smoking abstinence. *Nicotine Tob Res* 2007; 9:1207–12
12. Yamashita S, Yamaguchi H, Sakaguchi M, Yamamoto S, Aoki K, Shiga Y, Hisajima Y: Effect of smoking on intraoperative sputum and postoperative pulmonary complication in minor surgical patients. *Respir Med* 2004; 98:760–6
13. Warner DO: Perioperative abstinence from cigarettes: Physiologic and clinical consequences. *ANESTHESIOLOGY* 2006; 104:356–67

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## In Reply:

We want to thank Drs. Warner and Shi for the detailed letter in response to our editorial.<sup>1</sup>

We were satisfied to see that we have similar opinions regarding many aspects of the smoking and smoking cessation. Furthermore, in our editorial we cited extensively Dr. Warner's studies in this field.

However, we are surprised that Drs. Warner and Shi interpreted our message as a warning against smoking cessation shortly before surgery. Our goal was to demonstrate that perioperative smoking cessation is a complex problem requiring more research to guide clinical practice.

We support Drs. Warner and Shi in their advocacy of smoking cessation at any stage of a patient's life, including the perioperative period. However, we could not ignore concerns regarding potential side effects associated with abrupt smoking cessation and their possible interference with the perioperative course. We used our editorial as an opportunity to highlight controversial areas in perioperative smoking cessation and call for more high-quality research to enhance our knowledge in this very important perioperative field.

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## Reference

1. Katznelson R, Beattie WS: Perioperative smoking risk. *ANESTHESIOLOGY* 2011; 114:734–6

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## Risk of Latex Allergy from Pharmaceutical Vial Closures

### To the Editor:

We read with keen interest the educational review by Drs. Sampathi and Lerman on perioperative latex allergy in chil-

\* Available at: [www.asahq.org/stopsmoking](http://www.asahq.org/stopsmoking). Accessed April 5, 2011.