

## CORRESPONDENCE

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### An Easy, Safe, and Clean Procedure to Open Propofol Ampules

*To the Editor:*—In our hospital we use syringes that come sealed in a throw-away plastic container. I cut off the wide-mouth end of the throw-away cap of a 3-ml syringe with a strong and inexpensive pair of scissors. Another short cut is made along the length of the cap (fig. 1).

To open a propofol or any other ampule, wrap the upper part with an alcohol swab before inserting it in the plastic cap to snap the glass at the neck of the ampule. I discard the alcohol swab with the short glass tube of the ampule. The plastic cap can be reused.

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### Atmospheric Pollution with Topical Anesthetics

*To the Editor:*—Chlorofluorocarbons (CFCs) are man-made molecules polluting our atmosphere and are the focus of much political and environmental attention.<sup>1</sup> CFCs now rank second only to carbon dioxide as a cause of the increasing global greenhouse effect.<sup>2</sup> Most of the world's governments have agreed to a timed reduction in CFC use, in accordance with the Montreal Protocol of 1987.\*

I recently discovered the widespread use of CFCs in our hospital as a topical anesthetic and skin refrigerant. We were using Fluoro-Ethyl® (Gebauer Company), which contains 75% dichlorotetrafluoroethane (DTE), also known as CFC-12 or Freon, to numb skin and check levels of spinal and epidural anesthetics. We now have eliminated it from our institutional formulary and recommend others consider their need for this and similar drugs.

The problem with CFCs is their relative stability. They build up in the troposphere, diffuse around the globe, and after several years migrate into the stratosphere. CFC molecules undergo photolysis in

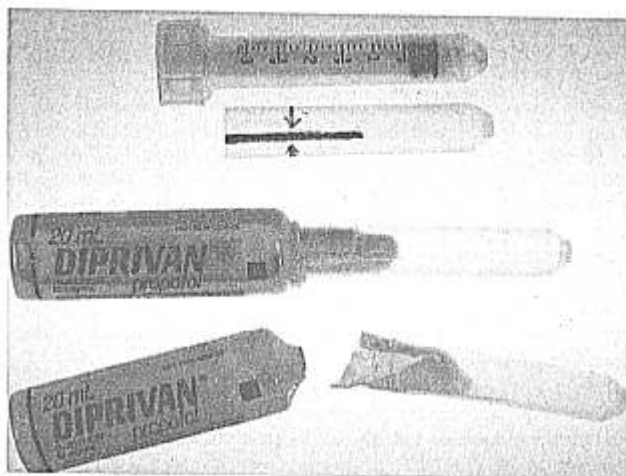


Fig. 1. Cut-off end of a disposable syringe plastic container, used to snap the neck of a propofol ampule.

the stratosphere; this process releases highly reactive chlorine atoms, which destroy the ozone present there. Stratospheric ozone at natural levels absorbs nearly all solar radiation with wave lengths between 240 and 320 nm before the radiation strikes the earth's surface. Solar radiation, if unblocked by ozone, would kill many unicellular organisms, damage the surface cells of many plants and animals, and augment greenhouse warming.

DTE has an atmospheric lifetime of 170 yr before breaking apart, which means DTE will continue to accumulate in the stratosphere for several years after we stop its release. DTE is more environmentally toxic than our halogenated inhalational anesthetics, for instance, which have atmospheric lifetimes of only 2–6 yr.<sup>3</sup> I believe we can find nonpolluting alternatives to CFCs and DTE in anesthesiology and that to do so is important to our environment.

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\* Montreal Protocol on Substances that Deplete the Ozone Layer. United Nations Environment Programme, 1987.