



A survey of dental instrument sterilizer chemicals used in the San Francisco area was conducted. This survey was part of a cooperative project sponsored by CA Dental Association, local dental societies, city agencies, and the US Environmental Protection Agency.

## WHAT WE FOUND

- About 65 % of dental offices use steam or dry heat sterilizer systems. A small fraction of the offices report using both steam and chemical sterilants.
- Glutaraldehyde is the most common active ingredient in chemical products used for cold sterilization of dental instruments.



- A mix of formaldehyde and ethanol is also a frequently used chemical sterilant at the surveyed offices.
- Dental assistants typically sterilize used instruments either daily or more often depending upon the office's instrument inventory, number of patients seen, and how much time is needed to process items through the sterilizer.

- On average the survey respondents use 43 grams per day of chemical sterilant solution per dentist. The highest reported daily amount is 427 grams per dentist.
- These sterilants contain an average of 4.6 grams per day of hazardous ingredients per dentist. The highest reported daily amount is 38 grams of hazardous ingredients per dentist.

## WHAT WE RECOMMEND

These survey responses give us clues on how dental practices can reduce their sterilant chemical use. Three primary strategies are:

- Consider steam or dry heat for sterilization of devices and instruments that can withstand this type of processing.
- Evaluate the active ingredients and other chemicals in your sterilizer solution. Choose products that are least toxic. Be aware of the particular health hazards of formaldehyde and glutaraldehyde, and use appropriate protective measures.
- If you choose to employ a chemical sterilant product then prepare and use it in accordance with manufacturer's directions. In addition, closely monitor the sterilization process to assure that the desired results are being obtained while consuming the least amount of sterilant practicable.

These strategies have the important benefits of decreasing patient and staff exposure to chemical hazards, and also decreasing the environmental impact of dentistry.

## MORE INFORMATION

Visit the Dental P2 Project website for additional information

<http://www.wrppn.org/dental>