



## 2016 IABDM Recommendations for The PROTECT PROTOCOL: Safe Mercury Amalgam Removal

**The room** where the mercury removal is to take place needs to have adequate filtration and ventilation in place<sup>1,2</sup>. This requires a high volume, air filtration system capable of removing mercury, as well as a negative ion generating/capturing device<sup>3</sup>. Data suggests that one of the most important controls to this end is the use of a high vacuum mercury vapor system/device in close (1-3 inches) approximation to the operating field<sup>4</sup>. Copious amounts of water to reduce heat and capture mercury aerosol with a conventional high speed evacuation device is required to reduce ambient mercury levels to safety standards<sup>5</sup>. High speed evacuation produces the best capture when fitted with a Clean Up device which is suggested<sup>2</sup>. Use of a non-latex dam is highly recommended. We recognize this may not be possible in 100% of the cases but this should be the goal.

**All present (staff and patient)** must be protected. The velocity of the particles generated by high speed drilling is too much to be overcome by suction devices<sup>6,7</sup>. It has been shown that this particulate can be expected to be spread from the patient's mouth to the top of the assistant and dentist's head to the knee of the patient<sup>2</sup>. Disposable or washable gowns and covers for the dentist, assistant and patient need be in place. These barriers should be removed and either discarded or washed after each procedure. If washed, they should be soaked in Hg-X powder before washing. Face shields if not wearing loops and hair coverings need be utilized by both the dentist and the assistant<sup>7</sup>. Additionally, either a well-sealed, respiratory grade mask rated to capture mercury or a positive pressure, well-sealed mask providing air or oxygen should be worn by all dental personnel in the room. Hg-X crème should be used before donning gloves. Non-latex gloves should be utilized<sup>8</sup>.

**The patient** A non-latex dam needs to be placed and properly sealed from the oral environment<sup>8</sup>. In order to cover the patient's skin and clothing a full body, plastic-backed apron as well as a full head/face barrier beneath the dam is to be utilized<sup>2</sup>. External air or oxygen delivered via a nasal mask is necessary to assure the patient does not inhale any mercury vapor or particulate due to the spread of mercury particulate and vapor<sup>7</sup>.

All contaminated components need be wiped with Mercon or Hg-X and disposed of/washed when removed from the operating area<sup>11,12</sup>. The operator needs to be aware that all objects used for the mercury removal process will continue to emit vapor so should be properly isolated<sup>2</sup>. Use of a mercury capturing wipe should be considered for all exposed surfaces at least once per day. During the opening and maintenance of suction traps in operatories or on the main suction unit, staff should utilize the appropriate personal protection equipment mentioned above.

# Sources:

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