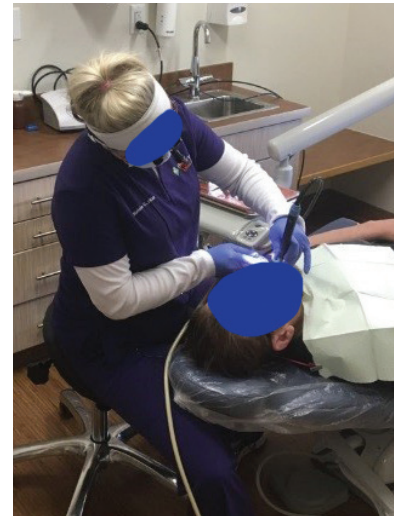
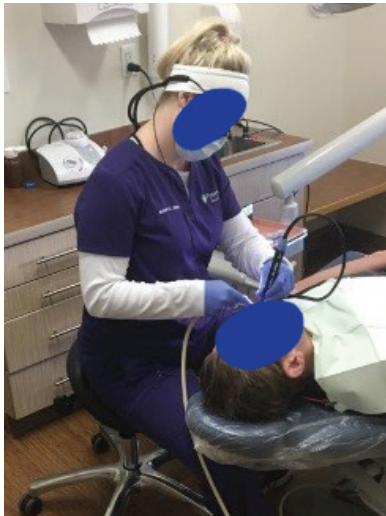


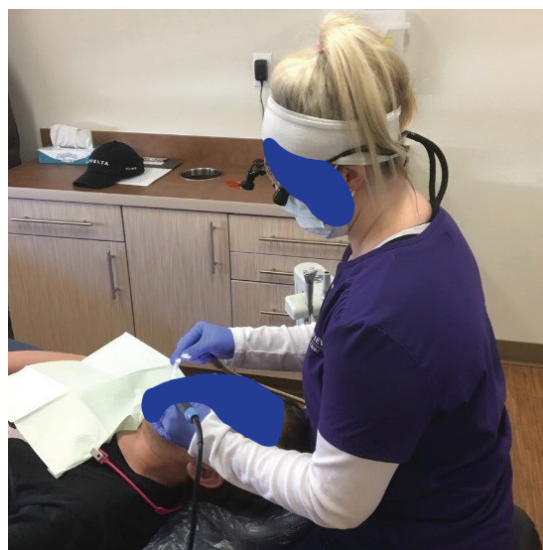
Ergonomic Issues and Solutions for Dental Hygienists

Every day a dental hygienist must perform the same tiny detailed movements while in a seated position. While these work conditions may not seem hazardous, if they are not addressed, they could lead to injuries associated with ergonomics.

In the two photos below, the dental hygienist shows considerable lateral flexion while working on the maxillary portion of the patients jaw. Specifically, this happened while working on the opposing side of the maxillary jaw.



Ideally, a hygienist's C-spine would be as close to neutral as reasonably possible. We found that with the 45 degree loupes, her neck posture was correct for many of her positions while cleaning. The photo below depicts the ideal neck posture observed.



Ergonomic Issues and Solutions for Dental Hygienists

Recommendations

For maxillary work, the maxillary plane should be tilted roughly 7 degrees beyond the vertical and up to 25 degrees for work on the 2nd and 3rd molars.

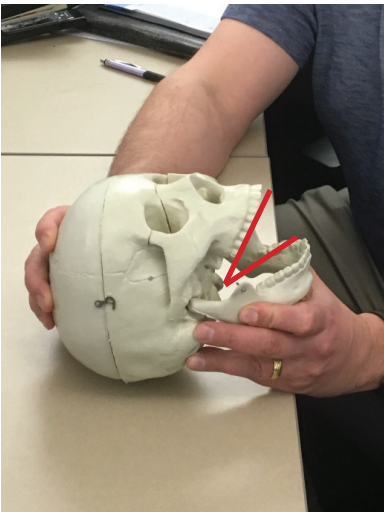


Depiction of the maxillary jaw rotated up to 25 degrees beyond the vertical.
Neutral hygienist's neck.

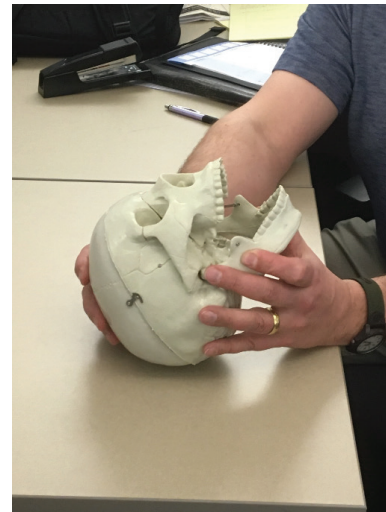


Incorrect maxillary placement.
Vertical maxillary plane in patient produces bent neck in hygienist.

For mandibular work, a chin down tilt should be used with the maxillary plane roughly 8 degrees ahead of the vertical for all 180 degree work except directly behind the patient.



Chin down maxillary tilt: much better view of mandibular work from side without hygienist's neck bending.



Incorrect vertical maxillary plane: difficult to see mandibular work from side without hygienist's neck bending

Ergonomic Issues and Solutions for Dental Hygienists

Recommendations (continued)



Mandibular work from behind patient – chin up maxillary tilt allows viewing with neutral hygienist's neck



Incorrect mandibular work from behind patient. Vertical or chin down mandibular tilt requires extreme hygienist's neck tilting.

To avoid lateral head flexion, movement of the saddle chair in the 180 degree plane surrounding the patients head should be utilized. Consider working on the maxillary side until completion, then alternating to the mandibular side of the jaw instead of alternating between the two.

180 degrees of access to the patient's mouth.



Patient

Ergonomic Issues and Solutions for Dental Hygienists

Recommendations (continued)

Use 45 degree loupes. We believe these have helped tremendously with the positioning of the neck in a neutral posture while performing daily cleanings.



Use a chair with a seat pan inclined with a 5 to 10 degree forward slope, rather than a flat seat pan. This can be a saddle style seat pan or standard seat pan – the tilting is the important factor.

