Quality Resource Guide

Performance of an Oral and Head and Neck Examination

Author Acknowledgements

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Dr. Sciubba has no relevant financial relationships to disclose.

Educational Objectives

Following this unit of instruction, the learner should be able to:

1. Understand the sequence of the extraoral and intraoral examination process.
2. List the nine steps of the oral and head and neck examination process.
3. Appreciate the dentist's responsibility of performing a comprehensive examination and the frequency of such.
4. Relate the normal anatomic landmarks and qualities to any alterations noted visually or by palpation.

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The following commentary highlights fundamental and commonly accepted practices on the subject matter. The information is intended as a general overview and is for educational purposes only. This information does not constitute legal advice, which can only be provided by an attorney.

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Introduction

Routine oral and head and neck examinations in association with review of the medical and dental history should be performed at six-month intervals, or at the request of the patient stating a specific complaint or by virtue of level of risk for disease. The orderly sequential examination, should consume approximately three minutes, plus the time necessary to document any positive findings and for discussion if necessary. In order to satisfy risk management requirements, it is important to note in the patient's chart or record that, even in the absence of signs or symptoms, such an examination was performed, including negative findings.

The medical history should be all-inclusive to provide the dentist with the appropriate information that would allow dental treatment to proceed in a manner which would not further risk the patient's health. Components of the history must include specific questions concerning risk factors related to development of oral cancer and dental diseases. Such questions relate to use of tobacco (smoking, chewing, snuff and other forms of smokeless tobacco, as well as the use of areca (betel) nut in any form) in addition to routine heavy alcohol consumption. Studies have implicated and proven certain human papilloma viruses (HPV), particularly oncogenic subtypes 16 and 18 as being causally related to tonsillar, base of tongue and oropharyngeal squamous cell carcinomas. Lip cancer (lower lip) is strongly related to chronic sunlight (ultraviolet) exposure, while certain nutritional deficiencies including vitamin A and iron may also be related to an increased risk of cancer development in the upper aerodigestive tract. Aside from local and systemic effects of these habits and practices, other systemic conditions, which may affect the oral cavity, must be evaluated. These may include long term immunosuppression, chronic anemia, prior malignancy, and gastrointestinal disease. While oral squamous cell carcinoma is the major neoplastic disease which must be ruled out in any oral and head and neck examination, a broad array of other less serious diseases or conditions should also be considered either as primary or secondary processes manifesting in the oral cavity and head and neck region. In terms of oral and oropharyngeal cancer it is important to recall that 3% of all cancers are located in this region with an associated slight male predominance of less than 2 to 1. The clinical relevance of an oral cancer evaluation includes the relatively poor overall survival of approximately 50%, with a major component of this poor survival statistic being late or delayed diagnosis of the primary lesion (so-called late-stage disease). Those oral cavity cases diagnosed in the later stages (Stages 3 or 4) carry extremely poor rates of cure and survival. Of note is the increasing incidence of HPV-associated oropharynx cancers where there is an overall improved 5 year survival relative to oral cavity cancer, with a resulting improved statistical combined survival of all head and neck cancers, though true oral cavity cancers essentially retain the poor historic 5 year survival statistic. The performance of a thorough examination is intended to identify abnormalities with establishment of an early diagnosis and appropriate treatment. In the case of oral cavity cancer, such early detection may prove lifesaving and more sparing in terms of extent of treatment and treatment-associated morbidity.

The Examination (see Tables 1-3)

The oral and head and neck examination, following a review or update of the medical history, should begin with the extraoral evaluation. For convenience and routine, a systematic nine step protocol may be employed. Sequencing of the examination should be consistent from one patient to another with a recommended order from the patient's right to their left. Neck evaluation must recognize the paired structures on either side of the midline and the symmetry of the normal neck when viewed from directly in front of the patient.

Table 1 - Components of the extraoral examination

Inspection
- ✓ Skin/hair texture
- ✓ Cervical symmetry and anatomic contents
- ✓ Facial features
- ✓ Range of jaw and head range of motion
- ✓ Size and shape of organs and structures

Palpation
- ✓ Trachea/thyroid gland
- ✓ Major salivary glands
- ✓ Regional lymph nodes
- ✓ Swellings, asymmetry and masses
- ✓ Tracheal alignment and neck musculature

Table 2 -Regional Lymph node assessment

- ✓ Location
- ✓ Size of individual lymph nodes
- ✓ Mobility
- ✓ Consistency
- ✓ Tenderness

Table 3 - Soft tissue assessment

- ✓ Leukoplakia/erythroplakia
- ✓ Submucosal masses
- ✓ Vesicles/bullae/desquamation
- ✓ Erosions and ulceration

Step 1

A **visual** inspection of the face, ears, head, and neck should be done with notation of any asymmetry, altered range of motion of the jaw and head, and any skin abnormalities. The latter may include ulcerations, growths, fissures, crusting and changes of color and texture. It must be borne in mind that the face is considered the prime site of sun exposure-related conditions including a wide range of degenerative as well as benign and malignant surface alterations.

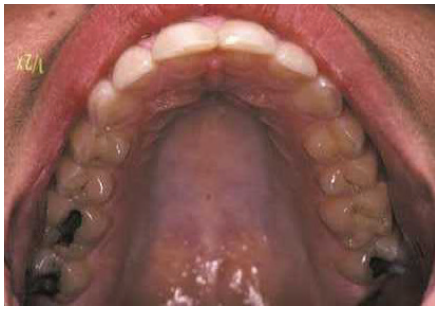
Step 2

Following visual examination, **palpation** of the anatomic triangles proceeds in an orderly fashion, that being the preauricular/postauricular, submandibular, submental, anterior cervical, posterior auricular, posterior cervical and occipital regions. Abnormalities may include tenderness or enlargement of lymph nodes as well as alterations in their degree of mobility (fixation) and changes in consistency (rubbery, doughy, and cystic). Submandibular salivary glands reside within the submandibular triangle along with lymph nodes at either pole of the gland, as well as superiorly and inferiorly. The thyroid gland, with symmetrical right and left lobes connected by a small band of thyroid tissue (isthmus) across the midline resides over the thyroid cartilage. The smooth, even consistency of the gland is characteristic as is an essentially absent profile on visual examination. With a swallowing maneuver the examiner will be able to better evaluate the normally minimally or subtly palpable thyroid gland for nodules, asymmetry, and masses. Submental lymph nodes are next to be palpated. While having the patient press the tongue against the palate, the mylohyoid and floor of mouth muscles will form a firm base allowing ease of lymph node palpation in this region. The largest major salivary glands, the parotid glands, may be palpated at their superior pole over the pre-auricular region. The flattened superficial (lateral) lobe of the gland will be smooth to the touch, non-tender and of even contour. The gland extends inferiorly slightly beyond and posterior to the mandibular angle. Numerous lymph nodes are located along the rim of the gland as well as within the gland itself. In the absence of pathology these lymph nodes are not generally palpable.

Step 3

Following the extraoral/cervical and major salivary gland evaluation, the examination proceeds to the **perioral and intraoral phase** beginning with the vermilion portion of the lips. Prior to this, however, the patient must remove any partial or complete dentures and eyeglasses. As with the extraoral examination, a consistent sequence should be established. The initial view of the lips should be at an at rest position with removal of lip covering such as lipstick and gloss allowing an examination of texture, color and surface integrity. Particular attention should be paid to the integrity of the junction between the skin and vermilion portion of the lip where a delicate uninterrupted and easily defined junction should be noted. In the open position, evaluation of the commissures is possible where absence of erythema, crusting and fissuring are expected and define the norm.

Step 4

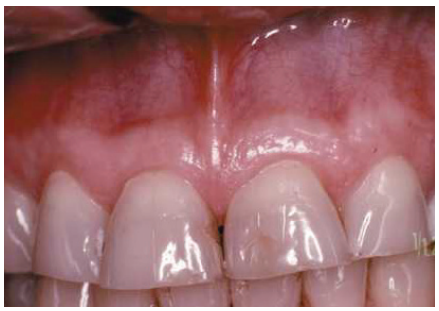


Intraorally, with the patient's mouth partially open, the upper and lower lips may be sequentially reflected allowing complete visualization of the labial mucosa, frenula and sulcus of each vestibule. This view will allow evaluation of color, surface quality and texture, swellings and abnormalities of the gingiva and alveolar mucosa. Bidigital palpation of the lips for masses or tenderness may then proceed prior to similar evaluation of the cheeks bilaterally with the mouth in a fully opened position. Smooth, glistening surface features should extend from the commissures, posteriorly to the anterior tonsillar pillar bilaterally. The examiner should evaluate for alterations of color as well as changes in surface texture, mobility, and masses by manual palpation.

Step 5

Continuing from the anterior tonsillar pillars, examination of the soft palate and uvula as well as the posterior wall of the oropharynx follows. Symmetrical elevation of the soft palate and depression of the tongue will allow visual inspection of the oropharynx and tonsillar region. Surface abnormalities and asymmetries should be noted.

Step 6

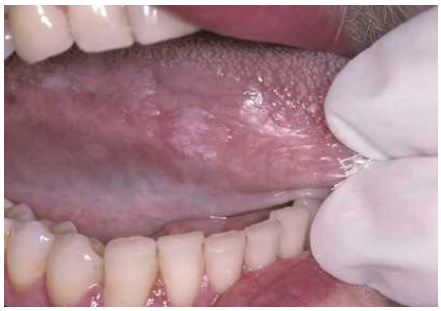


The keratinized mucosa over the hard palate and attached gingiva presents with a firm texture, pink color, and lack of mobility. Palatal contours should be even and symmetrical with gingival architecture showing complete, well-formed interdental papillae. A well-defined junction with the more vascular, distensible, and non-keratinized alveolar gingiva should be seen along the labial and buccal aspects of each quadrant. Sequencing of the examination should begin at the anterior palate, extending posteriorly to the right maxillary tuberosity and alveolar ridge, around the arch to the left maxillary tuberosity. Continuation to the left retromolar region, around the dental arch to the right retromolar area completes the gingival examination.

Step 7

Examination of the tongue begins with a partially opened mouth with the tongue at rest. The dorsum of the tongue should be evaluated

for symmetry, swellings, surface alterations, coatings, color changes, textural abnormalities and papillary alterations and tenderness as well as masses by way of digital palpation. With the aid of a mouth mirror and gauze pad, inspection of the left and right lateral and ventral tongue surfaces may proceed by gentle grasping of the tip of the tongue while reflecting the tongue away from the side being evaluated will allow inspection from the foliate papillae anteriorly to the lingual frenum.



Step 8

Using a mouth mirror the floor of the mouth can be examined bilaterally using the same lateral tongue extension maneuver. With the tongue displaced laterally, the floor of the mouth can be depressed with a mouth mirror thus affording extended clear visualization of the lingual sulcus and the oral floor from the foliate papilla region to the lingual frenum anteriorly.

At the completion of the visual examination bimanual palpation of the floor of the mouth can be performed to identify any masses, asymmetries or tender areas within the floor of the mouth as well as the submental and submandibular triangles.

Step 9

With one hand externally supporting the oral floor, a finger can be inserted and gently passed along the lingual flexure and floor of the mouth as the contents of the submental and submandibular triangles are palpated.

At this point a detailed clinical and radiographic evaluation of the dentition is performed including evaluation for caries, periodontal disease, bone qualities, including peri-radicular bone features, lamina dura integrity, and existing restorations and prostheses. Intraosseous radiographic changes in the form of radiolucent and radiopaque alterations can be assessed beyond the teeth. Evaluation of trabecular consistency, cortical integrity and uniformity and preservation or violation of anatomical landmarks including the margins of the maxillary sinus, nasopalatine duct, nasal floor, inferior alveolar canal, mental foramen, and other anatomic landmarks can be undertaken. Alveolar bone levels, contour and their relation to the dentition should follow, along with attention being paid to the alveolar segment of the maxilla and mandible for the presence of inflammatory neoplastic and developmental abnormalities. Finally, it is prudent to perform an annual examination of this type. In cases where risk factors such as prior neoplasia or pathology in the oral or head and neck region, or a history of heavy smoking and alcohol consumption as well as use of bisphosphonates, denosumab (a monoclonal antibody) bone stabilizing agents and angiogenesis inhibitors may be present, a semi-annual examination should be performed.

Further Reading/References

1. Marder, MZ. The standard of care for oral diagnosis as it relates to oral cancer. Compendium of Continuing Education in Dentistry 1998; 19 (6): 569-70, 72, 74, 76, 78, 80, 82.
2. Sciubba JJ. Oral cancer and its detection: History taking and the diagnostic phase of management. J Am Dent Assoc. 2001; 132: 12S-18S.
3. Pitts, NB. Oral Health Assessment in Clinical Practice: New Perspectives on the Need for a Comprehensive and Evidenced-based Approach. British Dental Journal 2005; 198(5):317.
4. Patton, LL, et al. Knowledge of Oral Cancer Risk Factors and Diagnostic Concepts Among North Carolina Dentists: Implications for Diagnosis and Referral. JADA 2005; 36(5):602-10.
5. Brocklehurst PR, Baker SR, Speight PM. A qualitative study examining the experience of primary care dentists in the detection and management of potentially malignant lesions. 1. Factors influencing detection and the decision to refer. Br Dent J 2010; 208(2): E3; discussion 72-73.
6. Kawahara M, Kuroshima S, Takashi S. Clinical considerations for medication-related osteonecrosis of the jaw: a comprehensive literature review. Int J Implant Dent 2021; 47: 49-57.
7. http://www.nidcr.nih.gov/OralHealth/Topics/OralCancer/TheOralCancerExam.htm
8. http://caonline.amcancersoc.org/cgi/content/fulll/52/4/195
9. http://www.dentalcare.com/en-US/dental-education/continuing-education/ce337/ce337.asp

Oral and Head AND Neck Examination

The following form can be duplicated and used to record the examination site and either a brief notation or reference to a more detailed description to be found in the progress notes.

		Inital	Follow-up Examinations					
		Date	Date	Date	Date	Date	Date	Date
Step 1	Visual inspection: head, face, ears, neck region.							
Step 2	Palpation of the major salivary glands and anatomical triangles of the neck and thyroid gland.							
Step 3	Inspection of the vermilion portion and commissures of the lips.							
Step 4	Examination and palpation of the labial and buccal mucosa and sulcular areas.							
Step 5	Examine the anterior tonsillar pillars, soft palate and posterior wall of the oropharynx.							
Step 6	Examination of the hard palate followed by evaluation of the attached gingiva.							
Step 7	Visual and manual examination of the dorsum of the tongue and the right and left lateral margins.							
Step 8	Visual and manual examination of the floor of the mouth and ventral tongue.							
Step 9	Bimanual palpation of the floor of the mouth and contents of the submental and submandibular triangles.							

POST-TEST

Internet Users: This page is intended to assist you in fast and accurate testing when completing the "Online Exam." We suggest reviewing the questions and then circling your answers on this page prior to completing the online exam.

(1.0 CE Credit Contact Hour) Please circle the correct answer. 70% equals passing grade.

1. **Recent increases in tongue base, tonsil and oropharyngeal cancer are related to a sexually transmitted infection by which of the following?**
   a. Herpes simplex II
   b. Human papilloma virus, type 31
   c. Human papilloma virus, type 16
   d. Human papillomavirus, type 13
   e. Human papilloma virus, type 51

2. **Oral cancer comprises what percent of all cancers?**
   a. 3%
   b. 7%
   c. 10%
   d. 20%
   e. 28%

3. **A review of a patient's medical history and performance of a routine oral and head and neck examination should be performed:**
   a. at the initial visit.
   b. at routine follow-up visits.
   c. at the request of the patient.
   d. by virtue of level of risk for disease.
   e. All of the above

4. **During the performance of the extraoral examination, which of the following structures should be palpated?**
   1. regional lymph nodes **2.** thyroid gland **3.** any swelling
   a. 1 only
   b. 2 only
   c. 1 and 3 only
   d. 1, 2 and 3

5. **Overall survival rate of oral cancer is approximately 50% after five years, with chief factor related to this statistic being:**
   a. immunosuppression
   b. tobacco use
   c. alcohol abuse
   d. late-stage diagnosis
   e. inaccurate diagnosis

6. **Keratinized oral mucosa is noted over which two regions?**
   a. floor of the mouth and hard palate
   b. hard palate and attached gingiva
   c. attached gingiva and buccal mucosa
   d. buccal mucosa and alveolar gingiva
   e. alveolar gingiva and hard palate

7. **Management and prognosis of oral cancer are most influenced by:**
   a. histologic grading
   b. extent of alcohol and tobacco consumption
   c. viral exposure
   d. early detection
   e. anatomic location

8. **What risk factors or behaviors most often lead to degenerative or neoplastic skin changes and diseases?**
   a. routine diagnostic radiographs
   b. dietary deficiencies of Vitamin B12 and Iron
   c. chronic sun exposure
   d. alcohol and tobacco abuse
   e. poor skin care

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Preferred Dentist Program ID Number: _____ ☐ Check Box If Not A PDP Member

AGD Mastership: ☐ Yes ☐ No

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Please Check One: ☐ General Practitioner ☐ Specialist ☐ Dental Hygienist ☐ Other

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