# Mastering Complete Dentures: Troubleshooting Common Complaints

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# Objectives

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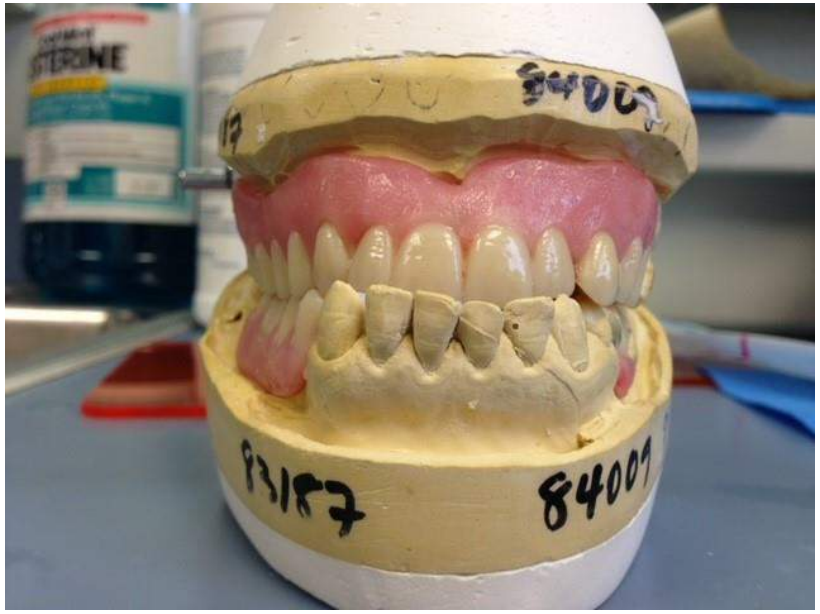
- Recognize the most frequent issues reported by patients wearing complete dentures.
- Understand techniques to assess the root causes of common denture related problems.
- Implement practical strategies and evidence-based interventions to effectively trouble shoot and resolve common complaints associated with complete dentures.



# Introduction

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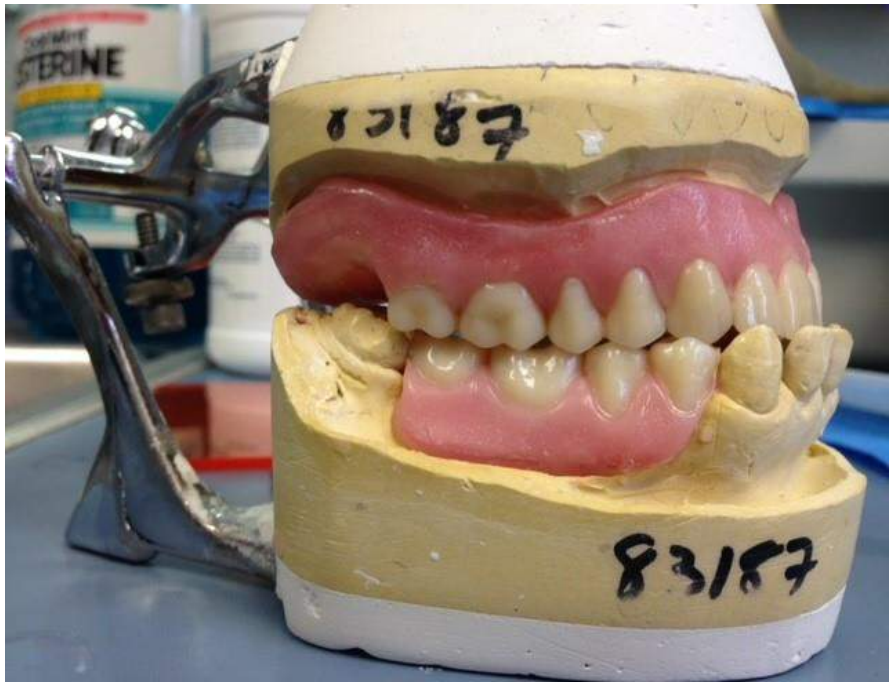
**Treatment Planning**

- Listening to the patient is the most important step in the denture process.
- Adequate history of the problem must be obtained, and a careful oral examination must be done to have a proper diagnosis of the patients needs.
- The solution is housed in the nature of the complaint.
- The patient will let you know what the issue is and from this lecture we can learn how to address those issues and how they translate to the dentures.



# Post Insertion Problems

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- Looseness
- Discomfort
- Poor appearance
- Speech problems
- Difficulty eating
- Clattering of teeth eating and speaking
- Nausea and gagging

# Complete Denture Surfaces

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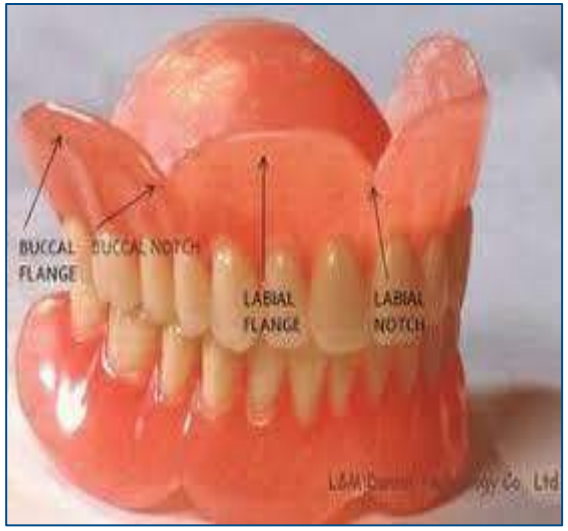
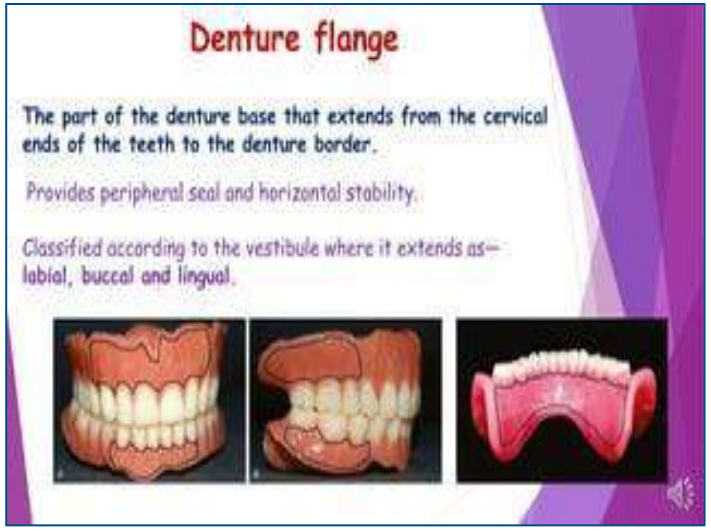
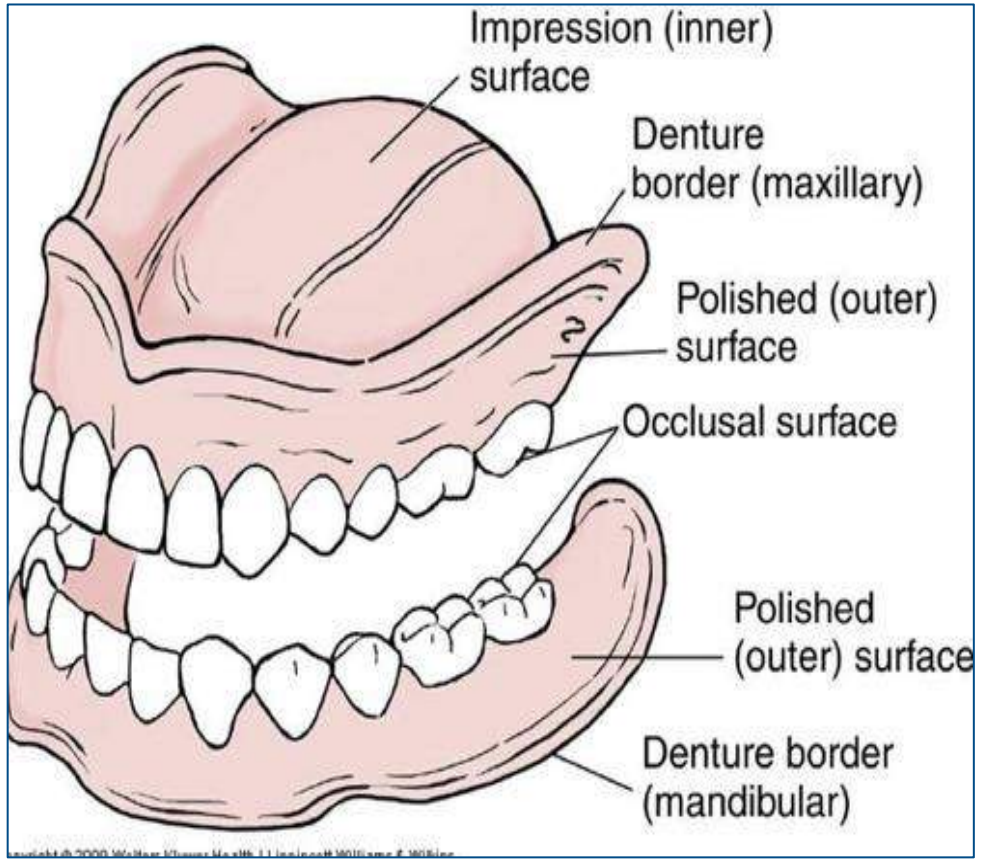
1. Impression/Intaglio surface
2. Polished/ external/ cameo surface
3. Occlusal



# Denture Adjustment Materials

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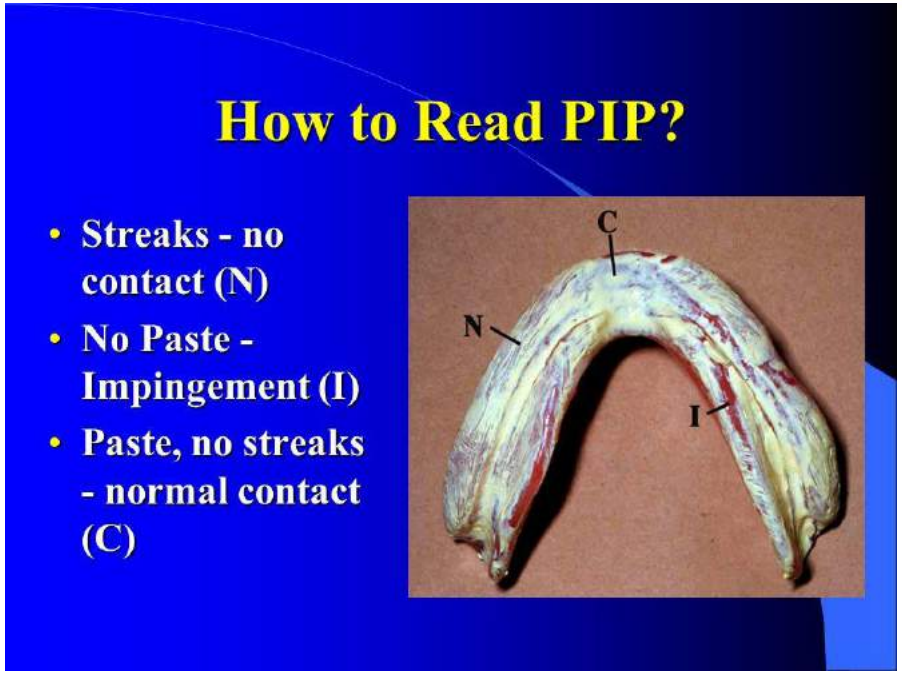



- PIP Paste
- HyDent Denture indicating paste
- Lathe and Buffs
- Denture adjustment/ Acrylic burs
- Horseshoe articulating paper


# Denture Discomfort: Impression surfaces

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| Complaint/ Symptom | Cause | Treatment |
|---|---|---|
| **Discrete painful areas** | Pearls or sharp ridges of acrylic on the fitting surface arising from deficiency in laboratory finishing<br>-lower knife edge ridge | 1. Finger Locating or Cotton Wool Snagging Test<br>2. Using Disclosing Material for Denture Adjustment<br>3. Permanent soft liner to cushion impact of knife edge |
| **Pain on insertion and removal, inflamed mucosa on ridges** | Denture not relieved in region of undercuts | 1. Use disclosing material to adjust in the 'wipe off' region, exercising caution to avoid excessive removal that could reduce retention.<br>2. Clinicians should insert and remove the denture themselves to avoid patient occluding. |
| **Areas painful to pressure** | Pressure points due to inaccurate impressions, working cast damage, or denture base warping. Also, account for residual issues such as retained roots, unrelieved frena, and immovable mucosa over bony prominences like tori. | Use disclosing material to accurately locate area to be relieved. If severe, remake may be required. Consider removal of root |
| **1. Painful mylohyoid ridge.**<br>**2. Denture lifts on tongue protrusion.**<br>**3. Painful to swallow** | Over-extended lower impression: instructions to laboratory not clear or non-existent | Determine position and extent of over-extension using disclosing material and relieve accordingly |
| **Generalized pain over denture-supporting area** | Under-extended denture base - may be the result of over-adjustment to the periphery, or impression surface. Check for adequacy of freeway space (FWS) | Extend denture to optimal available denture support area. If insufficient FWS, remake may be required |
| **1. Lack of relief for frenum and muscle attachment**<br>**2. Tissue pinching between denture and mouth**<br>**3. Sore throat and swallowing difficulty** | Peripheral over-extension resulting from impression stage and/or design error. Palatal soreness as post dam too deep | Relieve with aid of disclosing material. Care with adjustment of post dam - removal of existing seal and its replacement in greenstick prior to permanent addition may be required |

# Denture Discomfort: Occlusal and Polished Surfaces

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| Complaint/Symptom | Cause | Treatment |
|---|---|---|
| **Pain on eating in presence of occlusal imbalance** | Anterior prematurity or posterior prematurity, incisal locking, lack of balanced articulation | Determine where occlusal prematurities exist. Adjust occlusion by selective grinding. If severe error remount using facebow and new interocclusal records |
| **Pain lingual to lower anterior ridge** | If no over-extension present, look for protrusive slide from RCP to ICP | Mark deflecting inclines of posterior teeth with thin articulating paper. If slide exceeds half a cusp width, re-register and reset |
| **Pain and/or inflammation on labial aspect of lower ridge** | If no impression surface defect, may be lack of incisal overjet causing incisal locking | Reduce incisal vertical overlap. If appearance compromised, resetting the incisors may be required |
| **Pain about periphery of dentures possibly accompanied by pain in masseter and posterior temporalis muscles (classically pain increases as the day progresses)** | Vertical dimension of occlusion more than patient can tolerate | If excess less than 1.5 mm, grind to provide FWS. If greater than 1.5 mm, re-register to reset dentures at new VDO |
| **Cheek /Lip biting** | For cheeks - likely that functional width of sulcus was not restored. For lips - poor lip support/inadequate anterior horizontal overlap. Insufficient overjet in anteriors and posteriors respectively or decreased VD | For cheek biting, restore functional width of sulcus and/or reset. Posteriorly the buccal cusps are rounded or reset For lips, grind lower incisors to provide a more appropriate incisal guidance . |
| **Tongue biting** | Lack of lingual overjet - teeth generally placed lingual to lower ridge | Remove lower lingual cusps, or reset teeth |
| **Pain at posterior aspect of upper denture on opening** | Flange on buccal aspect of tuberosity too thick and constraining coronoid process | Use disclosing material to accurately define area involved, relieve and repolish |

# Denture Discomfort: Systemic Factors

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- Burning Sensation- Burning Mouth Syndrome.
- Beefy Red Tongue- Glossodynia/ Vit B12/Folate Deficiency
- Frictional lesions- Xerostomia
- Tongue thrusting/ Empty mouth chewing (often seen in elderly patients)- Possible neurological or psychological factors
- Herpetiform ulcers- Herpes Simplex is root cause, not denture related
- Painful ‘click’ related to TMJ on opening and/or closing
- Tenderness to muscles of mastication
- Allergy to denture materials- may be related to higher residual monomer content of acrylic. Rebase using controlled heat cure cycle. May remake use=ing polycarbonate resin instead.
- Erythematous mucosa/ angular cheilitis- Possible denture related stomatitis. May be ill fitting denture or opportunistic candidal infection. Iron or folate deficiency.

# Looseness: Decreased Retentive Forces

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| Complaint/ Symptom | Cause | Treatment |
|---|---|---|
| **Lack of peripheral seal** | 1. Border under-extension in depth<br>2. Border under-extension in width.<br>3. Often in disto-buccal aspects of upper periphery which may be displaced by buccinator on opening.<br>4. Posterior border of upper denture | 1. Add softened tracing compound to relevant border, mold digitally and by functional movements by patient. Replace compound with acrylic resin. As a temporary measure a chairside reline material may be used as described above<br>2. Check border is correctly seated on fixed tissue at junction with mobile tissue of soft palate. Trace thin string of softened tracing compound along impression surface of posterior border and firmly seat. Replace compound with acrylic resin. For temporary solution, use butyl methacrylate resin as above |
| **Inelasticity of cheek tissues** | Consequence of ageing process; scleroderma, submucous fibrous | Mold denture borders incrementally using softened tracing compound as functional movements are performed - aim to slightly under-extend depth and width of denture periphery. Repeated treatment may be required as inelasticity progresses |
| **Air beneath impression surfaces. Denture may rock under finger pressure. May see gap between periphery of flange and ridge. Occlusal error subsequent to warpage** | Deficient impression. Damaged cast. Warped denture. Over-adjustment of impression surface. Residual ridge resorption. Undercut ridge. Excessive relief chamber. Change in fluid content of supporting tissues | Reline or remake. Relieve areas of heavy contact between dentures and tissues prior to impression. Consult medical provider about medications impacting tissue fluids. |
| ***Xerostomia*: Reduces ability to form a suitable seal** | Medication by many commonly prescribed drugs, irradiation of head and neck region, salivary gland disease | Design dentures to maximize retention and minimize displacing forces. Prescribe artificial saliva where appropriate |
| ***Neuromuscular control*: speech and eating difficulties occur** | Basic shape of denture incorrect, lower molars too lingual; occlusal plane too high: upper molars buccal to ridge and buccal flange not wide enough to accommodate this; lingual flange of lower convex. Patient of advanced biological age, infirm | Denture adhesives. Remove lingual cusps of posterior teeth. Flatten polished lingual surface of lower denture from occlusal to periphery. Fill sulci to optimal width. Remake. |

# Looseness: Increased Displacing Forces

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| Complaint/Symptom | Cause | Treatment |
|---|---|---|
| ***Denture borders over-extended*.** **Slow rise of lower denture when mouth half open, line of inflammation at reflection of sulcal tissues; ulceration in sulcal region. Deep post dam on upper base may cause pain, ulceration** | If buccal to tuberosities, denture displaces on mouth opening, or cheek soreness occurs. Thickened lingual flange enables tongue to lift denture; thick upper and lower labial flanges may produce displacement during muscle activity | -under-reduce flange extensions, accurately redo border molding with tracing compound.<br>- Reduce posterior palatal seal/dam and have patient limit wearing until inflammation clears up. |
| ***Overextension in width.*** **Cheeks appear plumped out. In lower, the buccal flange may be palpated lateral to external oblique ridge** | Design error | - Use PIP paste to reveal excessive areas.<br>- Reduce over-extensions |
| ***Poor fit to supporting tissue.***<br>**Recoil of displaced tissue lifts denture** | Poor/inappropriate impression technique especially in posterior lingual pouch area | Reline if all other design parameters satisfactory, otherwise remake. Ensure denture is removed from mouth 90 mins prior to impression |
| **Denture not in optimal space** | - Molars set lingual to ridge on lower<br>- Posterior occlusal table too broad, tongue trapping<br>- Thick lingual flanges in tongue space, causing lifting<br>- Excess lip pressure, teeth set anterior/ labially to ridge<br>- Failure to adequately seat denture during reline impression | -reset teeth or remake dentures<br>- If remake or reset not an option:<br>- Remove lingual cusps and lingual surfaces to restore triangular form<br>- Remove most distal teeth from dentures. Reshape lingual polished surface.<br>- Thin labial and lingual flanges<br>- Reset anterior teeth. |

# Denture Problems due to Adaptation

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1. **Appearance**- Complaint may arise from patient or relative (after leaving office)
    - Shade of teeth too light or dark
    - Tooth too big or small
    - Teeth arranged too perfectly (missing diastema, too drastic a change)
    - Color of denture bases 'unnatural'

Suggestions:

- Get accurate assessment of patient's esthetic requirements. Allow time for patient to give comments at try-in stage.
- Use photographs and/or previous dentures as an example/template

2. **Creases at corners of mouth**- VDO inadequate, anterior tooth position inaccurate. Decreased labial fullness.

Suggestions:

Reset teeth. Redo jaw relations if VDO too short.

3. **Speech problems**- Sibilant sounds: 's' (Increased VD, excessive overbite/ overjet) , Bilabial sounds: 'p', 'b' (incorrect VD and incisor position), or Labiodental sounds: 'f', 'v' (incorrect VD and upper anteriors placed too far back.

- Can be due to patient not accustomed/adapted to prothesis.

Check for vertical dimension accuracy, and that vertical incisor overlap not excessive. Palatal contour should not allow excessive tongue contact or air leakage- assess using disclosing/PIP paste over denture palate while sound is made. Note It is recommended that the patient's speech is assessed at trial insertion visit, since this is difficult to correct, and remake may be best.

# Nausea and Gagging

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**Causes**:
Loose dentures, Poor occlusion, Thick distal termination of upper denture.
- Palatal placement of upper posteriors.
- Low occlusal plane.
- Overextended retromylohyoid area.
- Underextended denture borders.
- Psychogenic factors– refusing to swallow for fear of aspirating dentures. Saliva accumulates and triggers gag reflex.

**Treatment**:
- Correction of cause.
- Prescribing a combination of atropine and a mild sedative during initial period of denture use.
- Referring patient to a psychiatrist if condition persists, all other factors being normal.

# Questions

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References:
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