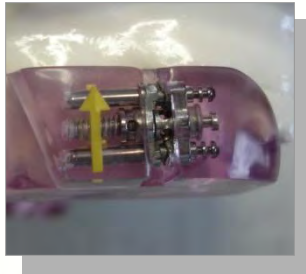
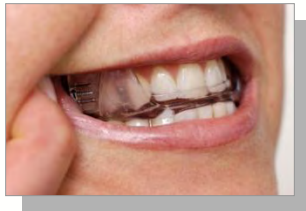


EXAMINATION, IMPRESSIONS AND THE BITE RECORD FOR THE SomnoDent®





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TOPICS

- Oral Examination
- Taking Impressions
- Using the George Gauge™
- Fitting the Appliance
- Optimal Adjustment/Titration
- Follow-up Appointments


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ORAL EXAMINATION



- TMJ & Muscle screening
- Range of motion of Mandible
 - Maximum Opening- Calipers
 - Maximum Protrusion
 - Record Overjet
- Soft Tissue Screen
 - Uvula Size
 - Tonsils
 - Soft Palate
 - Tongue Size
 - Oral Cancer
 - Periodontal
- Hard Tissue Screen
- OPG & Lateral cephalometric recommended
- Orthodontic Photographs - optional


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ORAL EXAMINATION / CEPHALOMETRIC ANALYSIS

A **cephalometric analysis** by use of the lateral ceph radiograph is a simple, cost effective tool to help determine the suitability of a patient for a mandibular advancement splint.

Three key measurements:

1. Hyoid bone to mandibular plane (MPH).

The normal measurement is 15mm +/- 3mm.

2. Posterior airway space (PAS). The normal measurement being 11mm +/- 1mm.

In general if the MPH is greater than 24mm and the PAS less than 5mm then the patients suitability for a MAS must be deemed questionable and this needs to be discussed with patient.



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ORAL EXAMINATION / CEPHALOMETRIC ANALYSIS

3. Hyoid bone to the centre of the sella turcica (S-H)

S-H <120mm mild/mod OSA recommend MAS

S-H >120mm severe OSA recommend CPAP

From a Paper presented at the Academy of Dental Sleep Medicine 14th Annual Meeting, Denver, Colorado, June 16, 2005 by Christopher Robertson BDS, DDS, MDS.



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TAKING IMPRESSIONS



- Choose a suitable tray
- Use a PVS material
- Fast set
- Get all the extensions and details in particular upper buccal area
- Your best crown impression and denture impression combined

PVS IMPRESSIONS



SomnoMed recommends pouring all impressions and hand articulating in bite record to ensure that skeletal mid-lines are aligned.

If facilities are not available for pouring impressions, PVS impressions may be sent to SomnoMed.



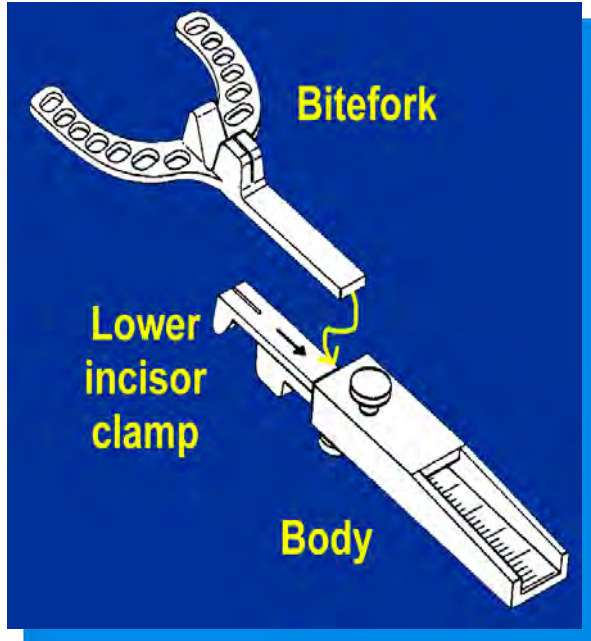
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BITE REGISTRATION

- Protrusive bite registration of 60%-80% of maximum protrusion, depending on the patient's range of movement and if there is TMJ and muscular implications.
- The bite registration should be taken with a wax or PVS by George Gauge™. The material needs to be well bonded to the bite fork and extended from anterior to posterior teeth.
- In case of missing posterior teeth (free end saddle), bite should be extended to ensure maximum support.
- Ensure that the skeletal midlines are aligned when at protrusive position.
- George Gauge™ recommended.
- If not using George Gauge™ minimum thickness of bite registration is 5mm.

GEORGE GAUGE™



- Intraoral device used to register jaw position for mandibular repositioning appliances

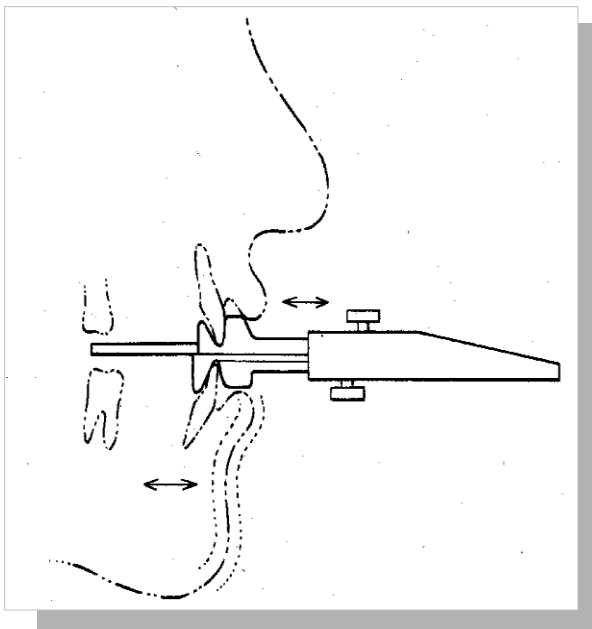
Comprises:

- Maxillary bite forks
 - 2 mm or 5mm thick (recommend 5mm)
- Lower incisor clamp
- Body, with mm ruler


GEORGE GAUGE™

- We recommend using the 5mm fork as it equates to less changes on articulator during splint fabrication resulting in a better fit.
- If the incisal edge of the central incisor does not touch the bottom of the groove because of crowding or a large cingulum, adjust the palatal portion of the incisal guide and not labially portion.
- Align facial midlines and note any deviations (on lab sheet in area indicated).
- Measure the start and finish position.
- Ensure an adequate range of movement; 6 mm is the minimal in most patients.

GEORGE GAUGE™—MEASURING CENTRIC

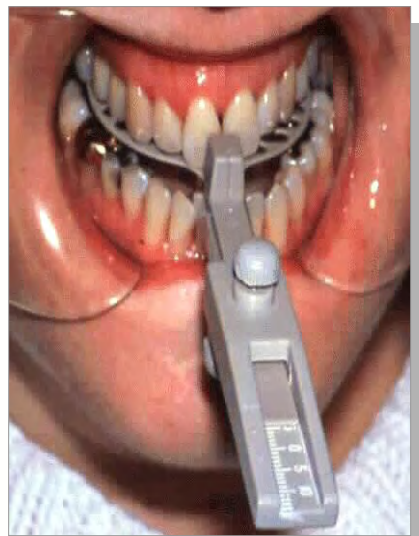


With the upper and lower incisors in their respective notches, measure the patient in the centric position and note the position on the millimeter rule.


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GEORGE GAUGE™-MEASURING PROTRUSION



Pictures courtesy of Peter George, DDS & Great Lakes Orthodontic Laboratory

Ask the patient to go to full protrusion.
protrusion. Note position on millimeter rule on
lab sheet.

Example +5 mm


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CALCULATING THE PROTRUSIVE POSITION

- Centric Position = -5 mm
- Protruded Position = +5mm
- Start Position of splint therapy set at say 66% of maximum position

$$66\% \times 10.0\text{mm} = 6.6\text{mm}$$

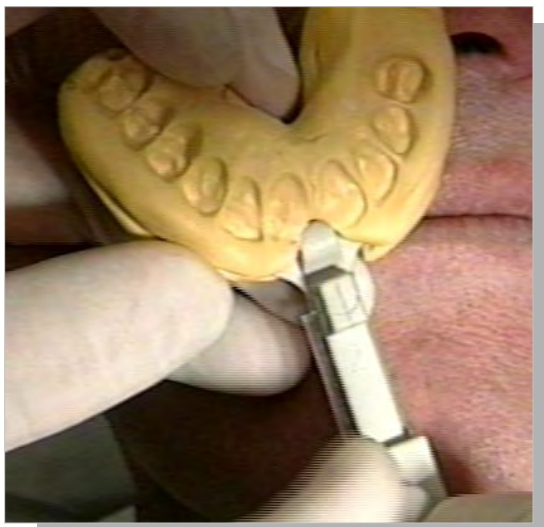
Therefore start position on George Gauge™ equals;

$$-5.0\text{mm} + 6.6\text{mm} = \mathbf{+1.6\text{mm}}$$

- Repeat three times to ensure consistency and “maximum” is repeated
- For most patients 66% of centric to maximum protrusion is a valid formula. However if there are TMJ problems, it may be necessary to advance the mandible by gradually titrating out.
- Once a position is obtained, ask the patient to hold in that position for 2-3 minutes and seek feedback. Adjust if necessary.



TAKING THE BITE RECORD



Picture courtesy of Peter George,
DDS & Great Lakes Orthodontic Laboratory

- The gauge with registration material is returned to the mouth with the lower incisor notch centered over the midline.
- Unscrew and remove the bite fork.
- Send the bite fork and study models (or PVS impressions) to SomnoMed.

IN LABORATORY



- All SomnoDent[®] appliances are returned to your office ten business days from the date the case is received at SomnoMed.
- The Case you send to SomnoMed should include upper and lower models, bite registrations, and a completed SomnoMed lab slip.
- Each appliance receives a quality check before being sent to your office , which ensures an excellent fit to the stone model.
- All appliances come with a three year warranty.

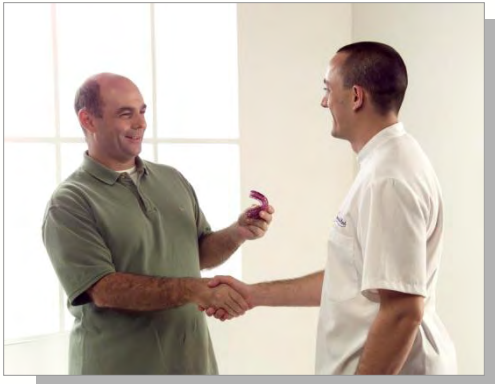

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FITTING THE DEVICE



- Even contact all round, in particular wings and lugs.
- No premature contacts.
- Passively held in place by the clasps (acrylic version).
- Minimum dislodging forces between the upper and lower plates.
- Adequate retention.
- No rocking or pivoting.
- A generalized tightness, not actively/orthodontically tight.
- Ease the patient into wearing it. Full first night compliance may not be appropriate.




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ADJUSTMENT AND TITRATION



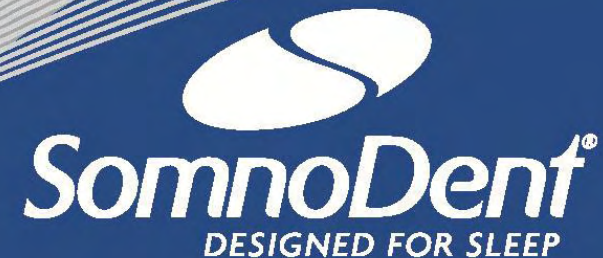
- Recall patient in one week
- Preferably the dentist should do the adjustment in getting the optimal position
- 10 turns per millimeter
- Same amount on each side
- Slow or quick, depending on TMJ issues


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SUGGESTED PROTOCOL FOR FOLLOW UP

- **Follow-up evaluation**
 - Assess progress
 - Change in symptoms
 - Compliance
 - Side effects
 - Change in Epworth Sleepiness Score
- **Examination**
 - Fit of appliance
 - Occlusal evaluation
 - TMJ/muscle evaluation
- **Next follow-up evaluation**



BUILDING RELATIONSHIPS

- The SomnoDent® is an oral device which must be issued by a qualified dental practitioner.
- Establishing a professional relationship with your local Sleep Physician and ENT offers physicians and surgeons an appropriate point of contact to refer patients for treatment.
- Dentists can also where appropriate screen for potential symptoms. Referring patients for further consultation to a specialist sleep physician for further examination.
- This promotes effective intervention in a problem that affects millions of Americans.
- As a dentist you represent a valuable resource in the treatment and management of OSA and can provide complementary patient care with physicians.

