Disclaimer

This movie is an educational resource only and should not be used to manage your health. All decisions about the management of malocclusion must be made in conjunction with your dentist or a licensed health care provider.
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INTRODUCTION

In dentistry the term “occlusion” means the contact between the upper and lower teeth. Malocclusion is the improper contact between the upper and lower teeth.

Malocclusion in primary dentition or baby teeth is common. About ninety percent of school aged children have some degree of malocclusion. Malocclusion can cause problems with the child’s bite, gum tissue, jaw joint, speech development and appearance.

In order to learn more about malocclusion, it is necessary to understand the normal alignment of teeth.
Normal Alignment of Teeth

To understand the normal alignment of teeth it is necessary to understand the dental terms used to describe the surfaces of the teeth:

- Buccal or Labial
- Lingual
- Mesial and Distal
- Occlusal
- Grooves and Cusp

**Buccal or Labial**

The tooth surface that is closer to the cheek is the buccal, and the one that is closer to the lips is the labial.

*(Refer fig. 1)*

**Lingual**

The tooth surface that is closer to the tongue.

*(Refer fig. 2)*

**Mesial and Distal**

The surface that faces the front of the mouth is the mesial, and the one that faces the back of the mouth is distal.

*(Refer fig. 3)*
Occlusal
The top surface of the tooth.
(Refer fig. 4)

Grooves and Cusp
Grooves: Intended parts of the occlusal surface. Cusp: Raised part of the occlusal surface.
(Refer fig. 5)

Normal Alignment of Teeth
Normal Occlusion refers to alignment of teeth and the way that the upper and lower teeth bite together.

With the eruption of primary first molars the first three dimensional occlusal relationship is established. The mesiolingual cusp of the maxillary molars occludes in the central fossa of the mandibular molars and the incisors are vertical.

Terminal plane: The mesiodistal relation of the distal surface of the upper and lower second primary molar is called the terminal plane when the primary teeth contact in centric occlusion (position of lower jaw when teeth are together.
(Refer fig. 6)
(Continued in next page)
Terminal plane can be classified into three types

**Flush or the vertical plane:** A normal relationship of primary molar teeth is the flush terminal plane.

**Mesial step:** The distal surface of the lower molar is more mesial to that of the upper.

**Distal step:** The distal surface of the lower molar is more distal to that of the upper.

(Fig. 7)
What is Malocclusion?

Malocclusion is a dental term referring to the misalignment of the teeth of the upper jaw with the teeth of the lower jaw. The word malocclusion literally means “bad bite”.

If left untreated, malocclusion can cause problems with the child’s bite, gum tissue, jaw joint, speech development and appearance.

(Refer fig. 8)

Types of Malocclusion

**Crowding:** The teeth are placed close together and overlap each other. Crowding occurs when the teeth are larger or if the jaw is smaller.

**Spacing:** There are large and uneven spaces between the teeth. Spacing is caused by missing teeth, smaller teeth or smaller jaw.

(Continued in next page)
Unit 2: Overview of Malocclusion

Rotation: Rotation is when the tooth turns out of its position.

Transposition: This is when teeth erupt in one another’s place.

Causes

Oral habits such as thumb sucking, tongue thrusting, mouth breathing, or prolonged use of bottle – these habits cause frequent pressure on teeth and may slowly move the teeth out of place.

Too much or too little space in the jaw

Extra teeth, lost teeth or abnormally shaped teeth

Dental caries or periapical infection leading to tooth loss can alter the permanent teeth

Eruptions

(Continued in next page)
Irregular jaw size and shape  Premature loss of teeth  Severe injury which leads to misalignment of jaws

Symptoms

Symptoms of malocclusion in primary teeth include:

- Crooked teeth
- Problems with eating or speaking
- Protruding teeth
- Slurring speech - trouble in saying certain words

- Permanent teeth coming in wrong position
- Difficulty in brushing
- Abnormal appearance of face

(Fig. 11)
Diagnosis

A dentist usually checks for malocclusion in children during regular dental visits. Diagnosis of Malocclusion is based on the following:

- Our Examination
- History
- X-rays
- Facial Photographs
- Impression

Our Examination

Oral Examination is done to determine:

- The placement of teeth
- Growth asymmetries between teeth and jaws
- Contact between the upper and lower teeth

History

History of any oral habits

X-rays

X-ray of face and teeth

Facial Photographs

Photographs of mouth and face taken to evaluate the profile.

Impression

Impression of patient's teeth and bite is taken and plaster, plastic or artificial stone models are prepared. These models duplicate the patient's teeth and are very useful in treatment planning.

Treatment Options

The aim of treatment in childhood and the teen years is to move permanent teeth into correct position. Malocclusion is treated by orthodontic treatment. This is the branch of dentistry that manages the growth and correction of dental and facial structures. Orthodontic treatment uses appliances, tooth removal, or surgery. The orthodontist will time the treatments to match the child's natural growth.
Extraction: Removal of some baby teeth to help in severe crowding.

Braces: These are appliances that correct dental irregularities and are commonly used in the treatment of malocclusion. These apply constant gentle force to slowly change the position of teeth, straighten them and properly align them with the opposing teeth.

Removable appliances: Here retainers made of plastic and wires are used. The appliance can be inserted and removed by the child.

Retainers: These are appliances that are used once the teeth have moved to their new position. Braces are removed before inserting the retainer. Retainers do not move teeth, they only stabilize them in their current position.
Jaw surgery: In some cases the child may need jaw surgery to correct the bite problem when the bones of the jaw are involved in the malocclusion problem.

Foods to be avoided during Orthodontia treatment include:

- Chewing gum
- Sticky foods
- Hard food
- Very hot food
- Ice-cream

Preventive Measures

Some types of malocclusion are not preventable but the following may help prevent the types that are:

- Control of oral habits
- Early detection and treatment
Disclaimer

Although every effort is made to educate you on malocclusion and prevention, there may be some things not discussed. Talk to your pedodontist or orthodontist about any concerns you have about malocclusion.
Your Surgery Date

Read Your Book and Material

View Your Video/CD/DVD/ Website

Pre - Habilitation

Arrange for Blood

Medical Check Up

Advance Medical Directive

Pre - Admission Testing

Family Support Review

Physician's Name: ____________

Physician's Signature: ____________

Date: ____________

Patient's Name: ____________

Patient's Signature: ____________

Date: ____________