

# Alveolar Distraction Osteogenesis: The ArchWise Appliance And Technique

Alveolar distraction osteogenesis (ADO) is a surgical procedure that involves the gradual distraction (separation) of the alveolar bone, the bone that surrounds the teeth. This procedure is used to correct a variety of jaw deformities, including:

- **Midline deviation:** The jaw is shifted to one side.
- **Asymmetry:** The jaw is uneven in size or shape.
- **Retrognathism:** The lower jaw is set back.
- **Prognathism:** The lower jaw is jutting out.

ADO is typically performed in two stages. In the first stage, the surgeon makes a small incision in the gum and inserts a distraction device into the alveolar bone. The distraction device is then activated, which causes the bone to begin to separate. The distraction process is continued for a period of several weeks or months, until the desired amount of correction has been achieved.

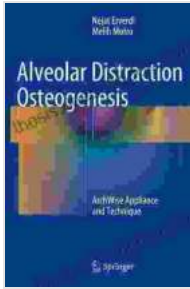
In the second stage, the distraction device is removed and the bone is allowed to heal. The healing process typically takes several months. Once the bone has healed, the patient's jaw will be in its new, corrected position.

## Alveolar Distraction Osteogenesis: The ArchWise Appliance and Technique

by J. D. Bartleson

★★★★★ 4.6 out of 5

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ADO is a complex procedure, but it is generally safe and effective. The risks of ADO include infection, bleeding, and nerve damage. The recovery period from ADO can be several months.

The Archwise appliance is a type of distraction device that is used to perform ADO. The Archwise appliance is a two-part device that consists of a fixed plate that is attached to the teeth and a movable plate that is attached to the alveolar bone. The plates are connected by a series of screws.

The Archwise appliance is activated by turning the screws, which causes the movable plate to move away from the fixed plate. This movement causes the alveolar bone to separate. The distraction process is continued until the desired amount of correction has been achieved.

The Archwise appliance is a versatile distraction device that can be used to correct a variety of jaw deformities. The Archwise appliance is also relatively comfortable to wear, which makes it a good choice for patients who are undergoing ADO.

## **Benefits of Alveolar Distraction Osteogenesis**

ADO offers a number of benefits over other surgical procedures for correcting jaw deformities. These benefits include:

- **Less invasive:** ADO is a less invasive procedure than traditional jaw surgery, which means that it is associated with less pain, scarring, and recovery time.
- **More predictable:** ADO is a more predictable procedure than traditional jaw surgery, which means that the results are more likely to be what the patient and surgeon expect.
- **More versatile:** ADO can be used to correct a wider variety of jaw deformities than traditional jaw surgery.

### **Indications for Alveolar Distraction Osteogenesis**

ADO is indicated for the correction of a variety of jaw deformities, including:

- **Midline deviation:** The jaw is shifted to one side.
- **Asymmetry:** The jaw is uneven in size or shape.
- **Retrognathism:** The lower jaw is set back.
- **Prognathism:** The lower jaw is jutting out.
- **Cleft lip and palate:** ADO can be used to correct the jaw deformities that are associated with cleft lip and palate.
- **Tumors:** ADO can be used to correct jaw deformities that are caused by tumors.
- **Traumatic injuries:** ADO can be used to correct jaw deformities that are caused by traumatic injuries.

## Contraindications for Alveolar Distraction Osteogenesis

ADO is not appropriate for all patients. Contraindications for ADO include:

- **Active infection:** Patients with active infections should not undergo ADO because the infection could spread to the bone.
- **Poor oral hygiene:** Patients with poor oral hygiene should not undergo ADO because the bacteria in the mouth could cause an infection.
- **Medical conditions that affect bone healing:** Patients with medical conditions that affect bone healing, such as osteoporosis, should not undergo ADO because the bone may not heal properly.
- **Smoking:** Patients who smoke should not undergo ADO because smoking can delay bone healing.

## Procedure for Alveolar Distraction Osteogenesis

The procedure for ADO is typically performed in two stages. In the first stage, the surgeon makes a small incision in the gum and inserts a distraction device into the alveolar bone. The distraction device is then activated, which causes the bone to begin to separate. The distraction process is continued for a period of several weeks or months, until the desired amount of correction has been achieved.

In the second stage, the distraction device is removed and the bone is allowed to heal. The healing process typically takes several months. Once the bone has healed, the patient's jaw will be in its new, corrected position.

## Recovery from Alveolar Distraction Osteogenesis

The recovery period from ADO can be several months. During the recovery period, the patient will need to follow the doctor's instructions for care of the surgical site. The patient may also need to take antibiotics to prevent infection.

The patient will typically experience some pain and swelling after surgery. The pain can be managed with pain medication. The swelling will usually subside within a few weeks.

The patient will need to eat a soft diet during the recovery period. The patient may also need to avoid certain activities, such as smoking and contact sports.

### **Results of Alveolar Distraction Osteogenesis**

The results of ADO are typically excellent. The procedure can effectively correct a variety of jaw deformities. The results are long-lasting and the patient's jaw will remain in its new, corrected position.

### **Risks of Alveolar Distraction Osteogenesis**

The risks of ADO include:

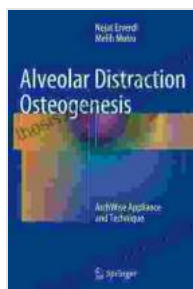
- **Infection:** Infection is the most common complication of ADO. The infection can be caused by bacteria in the mouth or from the surgical site.
- **Bleeding:** Bleeding is another common complication of ADO. The bleeding can be caused by the surgery or by the distraction process.
- **Nerve damage:** Nerve damage is a rare but serious complication of ADO. The nerve damage can be caused by the surgery or by the

distraction process.

- **Malocclusion:** Malocclusion is a condition in which the teeth do not fit together properly. Malocclusion can be caused by the distraction process or by the healing process.
- **Asymmetry:** Asymmetry is a condition in which the jaw is uneven in size or shape. Asymmetry can be caused by the distraction process or by the healing process.

ADO is a safe and effective procedure for correcting a variety of jaw deformities. The procedure is less invasive, more predictable, and more versatile than traditional jaw surgery. The results of ADO are typically excellent and the patient's jaw will remain in its new, corrected position.

If you are considering ADO, it is important to discuss the procedure with your doctor. Your doctor can help you determine if ADO is right for you and can answer any questions you may have.



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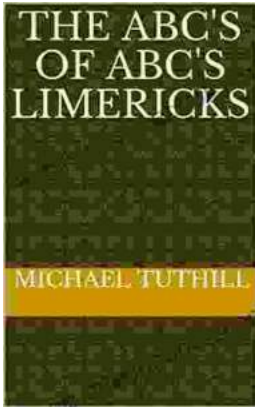
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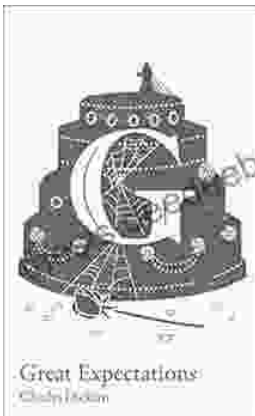
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