

## What does “distraction” mean?

Distraction osteogenesis is a technique for lengthening or reconstructing bones that utilizes the self-healing forces of the human body.

In this process, new bone tissue (so-called callus) starts forming between two separate bone pieces as they are slowly pulled apart.

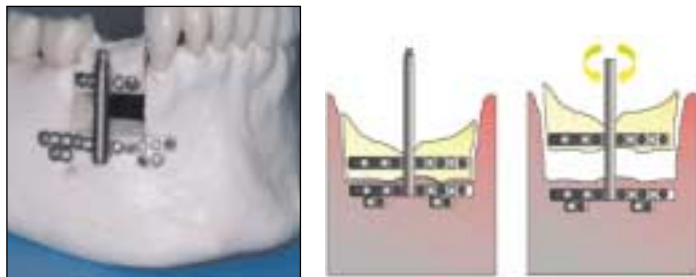
To pull the two bone sections apart, a small distraction apparatus is employed, which is fitted to the jawbone and needs to be activated by you on a daily basis.

Distraction involves different phases, to be such as:

**Latency phase:** Means the time period between the surgical intervention and the beginning of the distraction.

**Distraction phase:** The time period during which distraction takes place at a rate of approx. 1 mm per day.

**Consolidation phase:** The time period required for the bone to heal and ossify. This phase is completed when the distractor is removed.



## What does “alveolar process distraction” mean – and how does it work?

Alveolar process distraction achieves the vertical lengthening (reconstruction) of the maxilla or mandible. This represents a highly valuable technique in cases of premature teeth loss due to periodontal disease or injury, as it significantly improves the basis for subsequent prosthetic treatment. In any case, more bone substance means more support for, and better fixation of, dental implants and also ensures better aesthetic results.

## How long will the distraction process take?

This naturally varies from patient to patient. As a rule, the entire distraction process – from insertion to removal of the device – can be completed within a period of 3-4 months. Upon inserting the distractor, an initial latency period of 5-7 days is typically required. In the following distraction phase, the distractor is pulled apart approx. 1 mm per day, using an activation key.

As soon as the desired bone height is achieved, the consolidation phase sets in, extending over approx. 8-12 weeks. During this period, the distractor is left in place in order to stabilize the new (but still soft) bone. When the distractor is finally removed, the dental implants are inserted simultaneously.

**Make sure you always follow your doctor's instructions, as these could differ from this general, rough-and-ready description.**



Result following distraction

## What are the advantages of alveolar process distraction?

This type of distraction actually offers quite a number of advantages, compared to traditional bone reconstruction techniques:

- There is no need to harvest bone substance from other body regions in order to graft it onto the mandible or maxilla.
- No need to use artificial (bone substitute) material.
- The success rate is significantly higher for distraction (above 95%) than for conventional bone grafting (only 75-80%).
- Distraction not only forms new bone substance but also increases mucosa growth, thus achieving better aesthetic results.
- No further soft-tissue corrections required in most cases.
- More or less painless procedure

OPERATED ON: \_\_\_\_\_  
 BEGINNING OF DISTRACTION: \_\_\_\_\_  
 ROTATIONS PER DAY: \_\_\_\_\_  
 QUESTIONS? - TELEPHONE NO.: \_\_\_\_\_  
 FURTHER DOCTOR'S ORDERS: \_\_\_\_\_

Please observe arrow direction  
 when operating the distractor!  
 TRACK 1.0: 0.3 mm/rotation  
 TRACK 1.5/2.3: 0.5 mm/rotation  
 Groningen distractor:  
 0.5 mm/rotation

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Rotations	1														
	2														
	3														

### What needs to be observed during the therapy?

- Always comply fully with your doctor's instructions.
- Be sure to follow a soft diet during the entire distraction period.
- Careful oral hygiene is indicated during the entire treatment.
- Smoking can impair distraction results. So never smoke during the treatment!

### Who can benefit from alveolar process distraction?

Patients of all age groups suffering from a lack of bone substance in the maxilla or mandible; patients with orthodontic conditions such as ankylosed teeth or open bite.

For the following patient groups, a distraction failure cannot be ruled out:

- diabetics
- patients with osteoporosis
- patients with an immune deficiency
- patients having undergone radiation treatment

Practice/clinic (stamp)



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