

Intraoral Balancing Appliance for balancing the TMJ

Intraoral Balancing Appliance

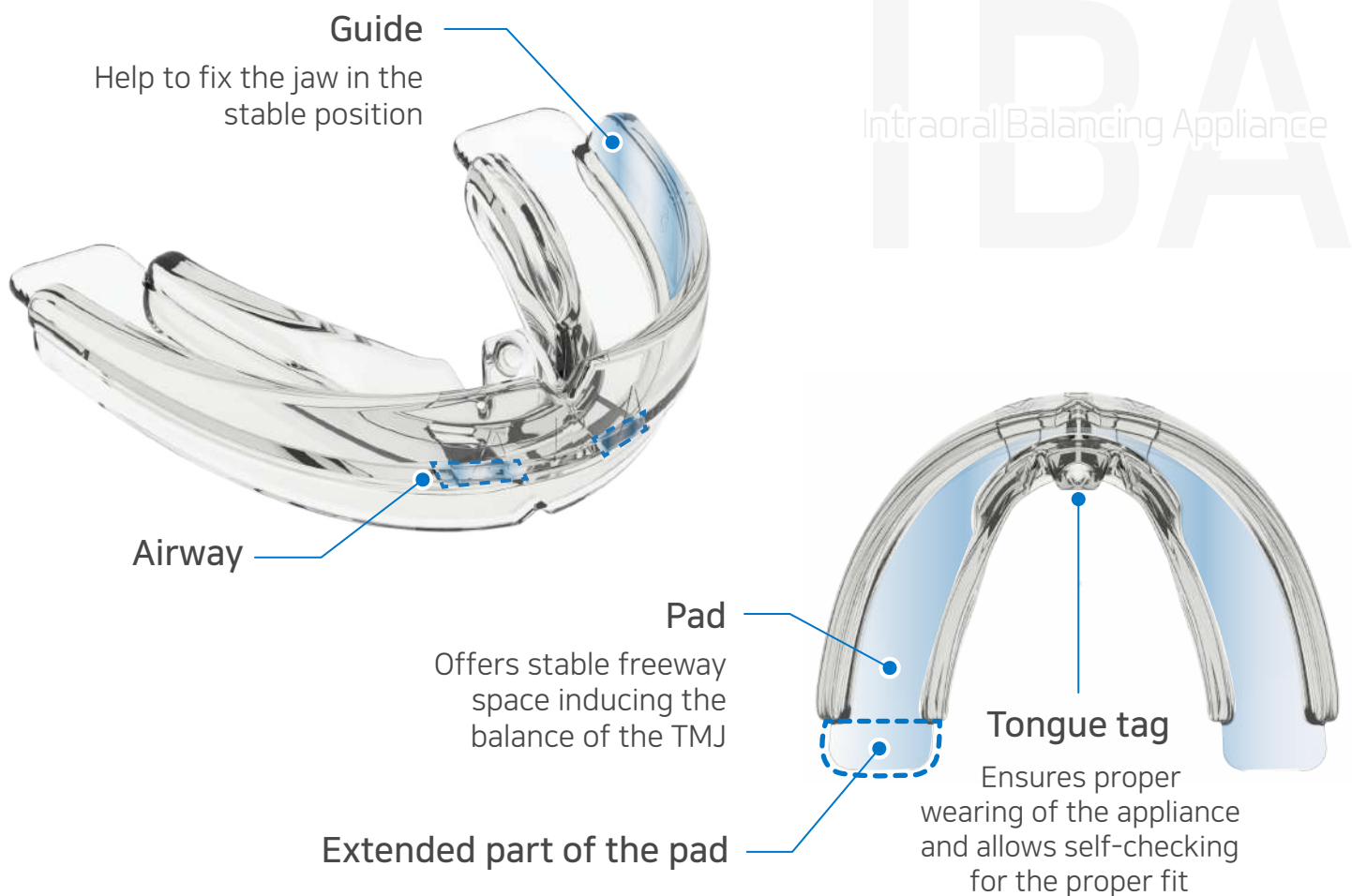
Simple Prescription, Comfortable Fit, Various Sizes.



1 Feature of IBA (Intraoral Balancing Appliance)

- ▶ IBA is designed to minimize abnormal signals of TMJ and to relieve muscle tensions around TMJ by offering stable freeway space.
- ▶ IBA is designed for an optimally stable and balanced position of the mandible in relation with the cranium.
- ▶ There are various types of IBA for different sizes and malocclusion type
- ▶ IBA is comfortable to wear and easy to prescribe with its various types and sizes.
- ▶ IBA is made of medical grade silicone with RoHS (Restriction of Hazardous Substances) and FDA (Food & Drug Administration of U.S.) compliance. IBA also has passed cytotoxicity test, skin irritation test, and intracutaneous (intradermal) reactivity test.

Structural Feature of IBA



2 IBA(Intraoral Balancing Appliance)™ Product Line

■ ABA



Designed after assessing 5,000 individual's data on the anterior and posterior occlusal angle of the maxillary and mandible. It comprises variety of sizes from 1-10.

■ ABA-ao · po



ABA-ao
For anterior open bite

ABA-po
For posterior open bite

■ OAA



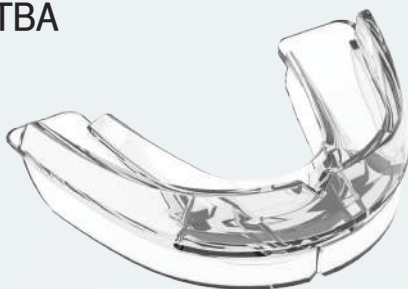
Designed for correcting malocclusion class II, III and it comprises variety of sizes from 1 to 10.

■ OBA



Designed for malocclusion class II & III.
Edge to edge bite.

■ TBA



The inner anterior guide is composed of the occlusal surface, so that the upper and lower teeth are in comfortable maxillomandibular position.

■ TBA-Special



Designed for free conversation in daytime by eliminating anterior guide. Can be used for the replacement of TBA for those who cannot wear TBA due to the crooked teeth or occlusion problems.

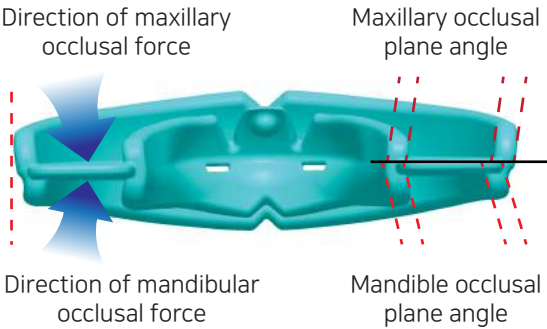
1 Product Types

	<div>ABA™</div>	<div>TBA™</div>	<div>OAA™</div>	<div>OBA™</div>
Sizes	Size 1 ~ 10	S, M, L, W, Special	Size 1 ~ 10	K, C, J, A, L
Applied for malocclusion type	Class I, II, III	Class I, II, III	Class II, III	Class II, III
Rear position of anterior mandible	2.5 mm rear (to normal occlusion)	2 mm rear (to normal occlusion)	Edge to edge	A / C : 1 mm rear J / K / L : Edge to edge
Gingival contact of inner and outer guide	Class I, II, III	Class I, II, III	Class II, III	Class II, III
The thickness of the inner guide	3 mm	Anterior : 1.8 mm Posterior : 1.15 mm	3.5 mm	2.5 mm
The thickness of the outer guide	3 mm	Anterior : 2.4 mm Posterior : 1.6 mm	4 mm	2.5 mm
The thickness of anterior pad	2 mm	3.5 mm	2 mm	3.5 mm
The thickness of posterior pad (7-8th teeth)	1.6 mm	S : 1.6 mm M : 1.9 mm	1.6 mm	C : 2 mm / A : 2.5 mm J / K / L : 2.4 mm

- ▶ ABA and OAA have been divided into various sizes ranging from 1 to 10 by measuring tooth height, width, length and occlusal angle of the anterior and posterior teeth based on a study on assessing the average size of teeth of 5,000 men and women in the East and West.
- ▶ ABA and OAA have low inner and outer guides, minimizing gum interference and enhancing comfort.
- ▶ IBA was designed its anterior and posterior pad thicknesses in the 1.6-3.5mm range for an ideal freeway space for maxillary and mandible.

2 Design Features of OAA & ABA

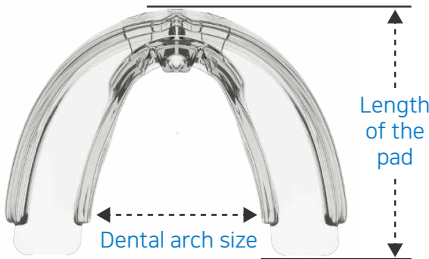
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3 Size Comparison Chart

ABA™ · OAA™			TBA™		OBA™				
	Child	Adult female	Adult male	Dental arch size	Length of the pad	Dental arch size	Length of the pad		
no.1				TBA-S	TBA-S	OBA-C / K	OBA-C	no.1	
no.2									no.2
no.3								OBA-K	no.3
no.4				TBA-M TBA-L		OBA-A	OBA-J	no.4	
no.5		★	★				OBA-A	OBA-A	no.5
no.6		★	★		TBA-M				no.6
no.7			★	TBA-W	TBA-L	OBA-J		no.7	
no.8			★			OBA-L	OBA-L	no.8	
no.9									no.9
no.10			Big size		TBA-W			no.10	

- ▶ The size of ABA-ao/po is equal to ABA #6 (anterior, posterior)
Applied for people with anterior or posterior open bite malocclusion
- ▶ Width difference of the pad : OBA-K < OBA-C / OBA-J < OBA-A



4 Hard & Soft Type Guide

	TBA-S	TBA-M	TBA-L	TBA-SPECIAL	TBA-W	OBA-K	OBA-C	OBA-J	OBA-A	OBA-L
Soft		★		★						
Standard	★	★	★	★	★	★	★	★	★	★
Hard	★	★	★			★	★	★	★	

- Soft type : less burden on the teeth and comfortable fit
- Hard type : for those who have bruxism and clenching habit

- ▶ ABA and OAA are made with the same degree of hardness as the standard type.
- ▶ If the patients set importance on the fit and easily get a cold sore, it is recommended to prescribe the standard or soft type and inform patients about the easy-tearing of the appliance in case of bruxism and clenching habit.

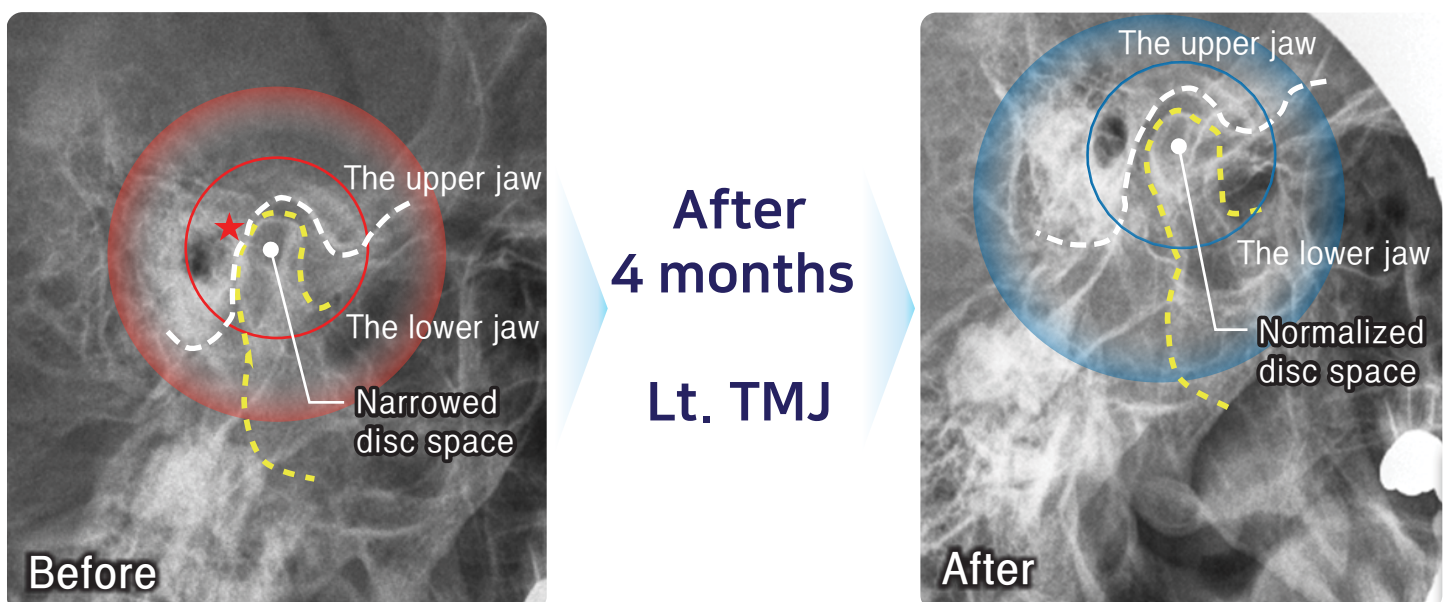
Prescription Guide for Each Step & Type

	STEP1	STEP2	STEP3
Deep-bite	OAA OBA	ABA TBA	TBA Special TBA (Soft)
Edge to edge bite	ABA TBA		TBA Special TBA (Soft)
Class III	OAA OBA	ABA TBA	TBA Special TBA (Soft)
Class II	OAA OBA	ABA TBA	TBA Special TBA (Soft)
Anterior Open-bite	ABA TBA	ABA ao	TBA Special TBA (Soft)
Posterior Open-bite	ABA TBA	ABA po	TBA Special TBA (Soft)

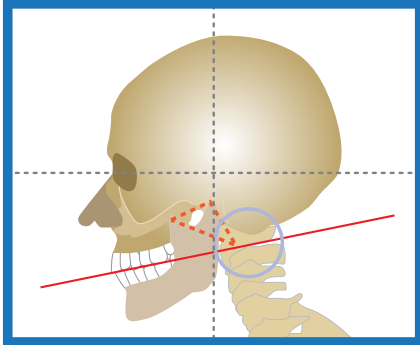
1 Clinical Treatment Cases



2 Changes in the jaw joint disc space before and after the treatment



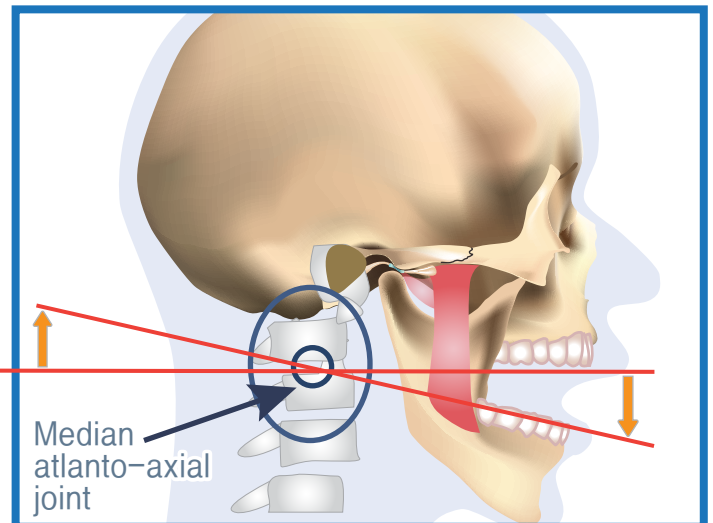
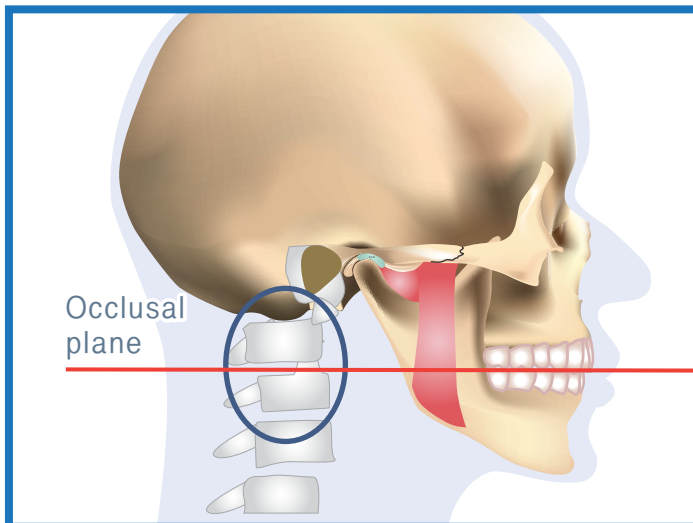
1 Relationship between TMJ and Atlanto-axial Joint (atlas, axis)



1. The atlanto-axial joint and both TMJs form a balanced triangle
 - ▷ change of the atlanto-axial joint according to TMJs
 - ▶ change of center of gravity of the head
2. TMJ balance determines the alignment of the atlas and the axis.
 - ▷ Balance of the TMJ determines atlanto-axial alignment.
3. Atlanto-axial joint becomes the central axis of rotary motion of the mandibular and is positioned on the occlusal plane.

※ Ref : Cerebrospinal functional medicine by Y.J. Lee (Seoul, 2007, p. 211-218)
 Template therapy for systemic improvement
 (International society for functional orthodontics and TMJ, 1997, p.32, 35, 45)

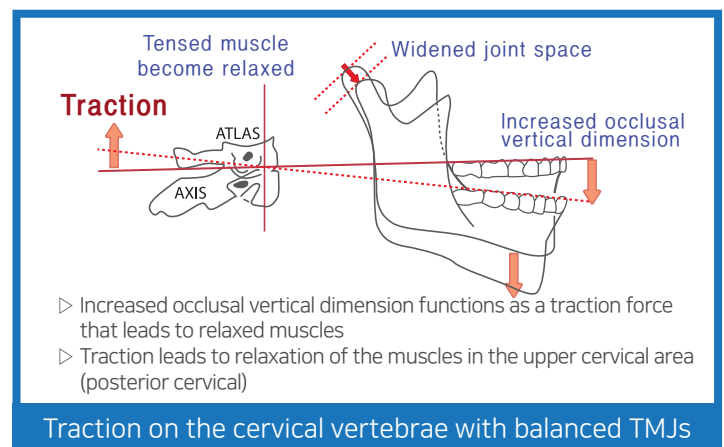
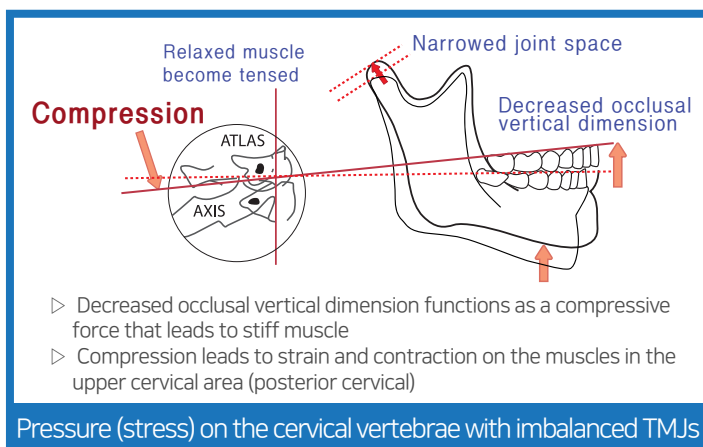
2 The Axis of Mandibular Movement ▶ Axis (Median Atlanto-axial joint)



The axis of the mandibular movement is positioned not on the mandibular condyle, but on the dens of the atlanto-axial joint (C0, 1, C2).

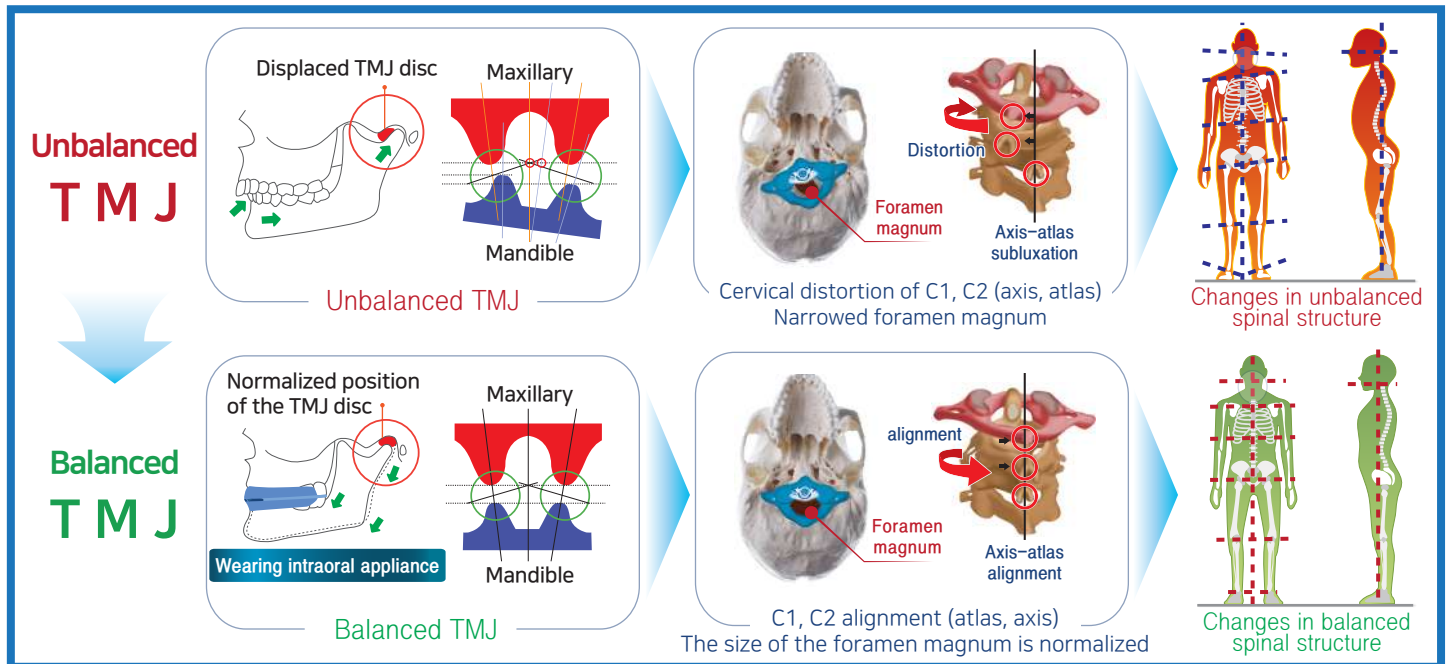
※ Ref : Template therapy for systemic improvement (International society for functional orthodontics and TMJ, 1997, 32)
 ※ Ref : Qadrant Theorem by C. M. Guzay

3 The Relationship Between the TMJ, Atlas and Axis: Pulling and Pressure of Atlanto-axial joint



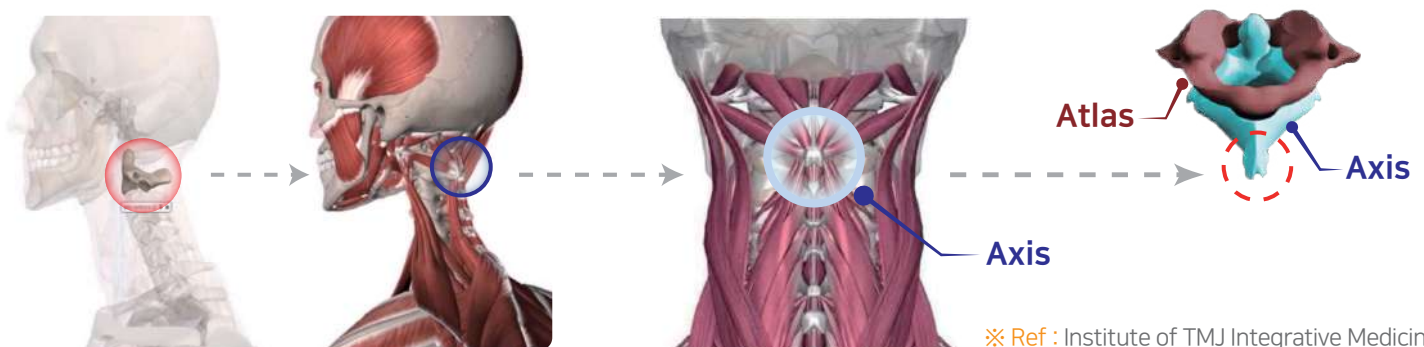
※ Ref : Template therapy for systemic improvement (International society for functional orthodontics and TMJ, 1997, p. 62, 63)

4 Body Changes and Treatment in Balanced and Unbalanced TMJs



5 Causes of Spinal Structure Imbalance

► In our body there is only one vertebrae with an odontoid which is **axis (C2)**.



Q. Why is C2 important?

A. Our spine comprises 7cervical, 12thoracic, 5lumbar, sacrum(sacral vertebrae), 4 coccyx (coccygeal vertebra)vertebras. **From among these only axis has an odontoid (C2).**

Once the axis is distorted, the rest of the vertebrae in the spine will soon follow, as will the pelvis and cranial bones, like in the **domino effect**. Therefore, the axis is very important factor.

Axis= the axis of the body movement

1. Axis= the axis of the body movement

- The axis of the spine (scoliosis, lordosis, kyphosis)
- The axis of the rotatory movement of the skull (rotation, lateroflexion, retroflexion)
- The axis of the rotatory movement of the TMJs (the orbital motion of the central axis)

2. TMJ imbalance=a factor of axial imbalance

- Major factor of the atlas, axis subluxation
- Major factor of the changes in the whole body posture
- Major factor of the cranial movement



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