



### Clinical Tip

ISSN: 2581-3218  
IJDR 2022; 7(1): 12-13  
Received: 25-02-2022  
Accepted: 27-03-2022  
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www.dentistryscience.com  
doi: 10.31254/dentistry.2022.7104

## The Protraction Pendulum Appliance

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James J Hilgers of California introduced the Pendulum Appliance in 1992 as mechanism for Class II non compliance treatment. The appliance uses a nance acrylic button for palatal anchorage and 0.036" TMA springs to deliver a light and continuous force to upper molars distalization without affecting palatal button [1]. Pendulum appliance can also be used for molar protraction both unilateral or bilateral by reversing the spring bend back and activating towards the molar to be protracted.

### Appliance design:

Protraction spring with made with 0.036 TMA wire with helix and U loop for creating intrusion or extrusion effect on molar along with reverse bend back is given, which is engaged from distal of lingual sheath of molar and palatal acrylic shield is made which is extended from premolar to premolar with bite planes, which acts as anchorage unit and also opens bite for correction of incisors from Div II to Div I.

- A) Class II Div II with right 1<sup>st</sup> molar missing
- B) Placement of the Unilateral protraction pendulum appliance
- C) Pre activation of protraction spring
- D) Engagement of protraction spring from distal side in lingual sheath for Molar protraction.

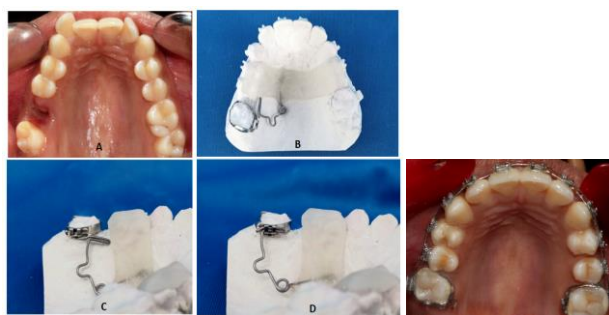


Figure 1: Present stage after molar protraction

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### Advantages

- 1. Unilateral molar protraction.
- 2. Molar de rotation, intrusion or extrusion can be achieved.
- 3. Bodily movement of molar.

## REFERENCES

1. Hilgers JJ. The pendulum appliance for Class II non-compliance therapy. *J Clin Orthod.* 1992;26(11):706-14.

### HOW TO CITE THIS ARTICLE-

Salman, Lalitha Ch L, Kumar KS, Naidu V. The Protraction Pendulum Appliance. *Int J Dent Res* 2022; 7(1):12-13. doi: 10.31254/dentistry.2022.7104

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