

**Important Facts Regarding The Use Of The
Ortho-Tain® Preformed Positioners & Ortho-T®**

1. Preformed positioners prevent overbite relapse by:
 - A) Being placed in mouth immediately after bracket removal
 - B) Encouraging eruption of posterior teeth
 - C) Depressing anterior teeth.
2. Preformed positioners allow a relapse of 6.5 % of original overbite correction (4.08 mm) beyond normal in 2 1/2 months.
3. Original overbite of 4.72 mm. was corrected to .64 mm. and relapsed to 1.25 mm. or .25 mm. (6.5%) beyond normal in 2 1/2 months.
4. Custom positioners allow a relapse of 62.5 % of original overbite correction (3.5 mm.) in 2 1/2 months.
5. Without retention 20% of overjet correction is lost in 7 days, 25 % in 2 weeks, and 30 % in 3 weeks.
6. Without retention 20 % of overbite correction is lost 7 days, 25 % in 2 weeks, and 30% in 3 weeks.
7. Without 14 days following bracket removal, 80% of the relapse of overjet and overbite occurs during the first 7 days, and 20% during the second week with no retention.
8. Any change in the canine-to-canine width during active treatment (especially of the lower) will relapse rapidly and will usually accelerate the return of the overbite.
9. Be careful to treat overbite while significant growth still remains in order to reduce relapse.
10. Overcorrect deep overbites to reduce relapse.
11. Correct overbites to end-to-end vertically or slightly beyond.
12. Good prognosis of overbite correction and retention consists of the following:
 - A. Presence of major facial growth spurt
 - B. Normal to strong vertical growth direction
 - C. Small initial antero-posterior skeletal relation
 - D. Small initial free-way space with "Full" or normal amount of eruption of posterior teeth
 - E. Narrow face
 - F. Labial inclination of lower or upper incisors
 - G. Normal to steep mandibular plane angle
 - H. Normal to long vertical anterior face height
 - I. Normal to long vertical lower anterior face heights.
13. Poor prognosis of overbite correction and retention consists of the following:
 - A. Lack of vertical facial growth,
 - B. Strong horizontal growth direction
 - C. Short vertical anterior face height
 - D. Flat mandibular plane angle
 - E. Upright or lingually -inclined lower or upper incisors
 - F. Excess overjet and mandibular retrusion
 - G. Wide face and strong masseter muscles
 - H. Excess free-way space with shortened posterior tooth eruption.
14. Case with initial deep overbite wear the Ortho-Tain® positioner 2 - 4 hours daily and passively while sleeping

for 2-3 months, and 1 hour daily and at night for 12 months, then only at night for another 12 months.

15. Try to encourage eruption of posterior teeth during retention to reduce overbite relapse.
16. The disadvantage to have the positioner worn only at night with deep overbite tendency is because overjet is retained well with only nighttime use while overbite is allowed to relapse (because it is poorly retained with only passive night use) which can cause a potential posterior - superior condylar displacement potentially creating a TMJ problem.
17. Overbite relapse (especially without overjet relapse) can create incisal interference's and possible TMJ displacements.
18. Cases with no initial overbite and no incisal rotations wear the Ortho-Tain[®] preformed positioner only at night for ideal overjet retention.
19. Cases with no initial overbite, or rotations but with severe overjet wear only at night.
20. One hour daytime exercise is equal to one night's wear but not conversely in cases with initial deep overbites and /or crowding.
21. Daytime wear generally retains teeth better than nightwear, (especially in overbite and crowding cases)
22. In poor prognosis cases, wear Ortho-Tain[®] preformed positioner more during days- 1 hour per day for at least 1- 2 years.
23. It is less important to fully correct overjet than overbite since it is so easily corrected with the Ortho-Tain[®] Positioner.
24. Lower incisor rotations are easily corrected with daytime exercise with the Ortho-Tain[®] positioner.
25. Recurrent lower incisor rotations can be a problem with uncooperative patients.
26. Daytime positioner wear is necessary where pre-treatment lower incisor crowding was present.
27. A lower canine-to-canine lingual fixed retainer is recommended where more than 1 to 2 mm of pretreatment crowding and rotations are present.
28. Positioners are incapable of retaining over-expanded or constricted arch widths.
29. Don't expand or constrict lower bicanine width during active treatment.
30. Intracanine changes that do occur during Ortho-Tain[®] preformed positioner retention are insignificant.
31. Canine width treatment changes return to the original in spite of positioner wear.
32. Dramatic treatment alterations in intracanine or palatal width should not be retained with a positioner.
33. Arch widths not altered during treatment are not changed by positioners; positioners do not alter molar arch widths.
34. There is no difference in molar arch width retention between Ortho-Tain[®] preformed and custom positioners.
35. Changes in molar arch width during treatment return in spite of positioner wear; positioners cannot alter molar arch width.
36. Molar arch widths constricted during treatment tend to revert during retention and conversely and occurs independently of preformed positioner wear.

37. Overcorrect midline discrepancy during active treatment in the opposite direction and equal amount than originally present.
38. Of those cases that have a midline off by 0.5 MM. initially not corrected during active treatment, 75% are corrected completely by Ortho-Tain[®] preformed positioner use.
39. Of those with midlines off by 1 mm., 58% will be corrected by Ortho-Tain[®] preformed positioner use.
40. Of those with midlines off by 1.5 mm., 67% are completely corrected by Ortho-Tain[®] preformed positioner use.
41. Of those with midlines off by 2 mm., 33% are completely corrected by Ortho-Tain[®] preformed positioner use.
42. If the midlines are off by .5 mm., the positioner will correct 75% of cases completely; if off by 1 mm. Only 58% will be corrected; if off by 2 mm. Only 33% will be corrected completely
43. Ortho-Tain[®] preformed positioners cause a mean 0.33 mm. improvement in molar relation toward Class I per side in 2.5 months.
44. The Ortho-Tain[®] preformed positioner in 2.5 months causes a 13.3% improvement of the initial A-P molar relation resulting in final 90.7% total improvement.
45. Range of molar movement toward Class I per side is 0.5mm. to 2.5 mm. During 2 1/2 months of Ortho-tain[®] preformed positioner wear.
46. There is no significant difference in A-P molar movement or retention between Ortho-Tain[®] preformed and custom positioners.
47. Bucco-lingual posterior adjustment is easily accomplished and can be depended on to make up to 3 mm. of improvement in the molar and premolar areas, but into complete posterior quadrant cross-bite adjustments.
48. 67% of those cases requiring bucco-lingual adjustment at the end of active treatment were perfected by the use of Ortho-Tain[®] preformed positioner in 2 1/4 months.
49. Ortho-Tain preformed positioners moved molars bucco-lingually 0.85 mm. (mean) per side toward a normal relation in 2 1/2 months.
50. The mean bucco-lingual molar movement of those showing improvement are 1.17 mm. (mean) as a result of Ortho-Tain[®] preformed positioner wear.
51. Average midline improvement is 0.5 mm, while the greatest change is 2.5 mm. with Ortho-tain[®] preformed positioner use.
52. During active treatment the midline improvement (in mm.) was an average of 65% in a study while the preformed Ortho-tain[®] positioner got an additional 23 .5% giving total 88.5% change.
53. Of 86 TM Joints tested, 6 (7.0%) showed presence of crepitus where none was present originally following treatment and 37 months of Ortho-Tain preformed positioner use.
54. There is no evidence of root resorption or devitalization during long-term continued use of the Ortho-Tain preformed positioner (Mean 38 months of use).
55. There is no clinical evidence that positioners are capable of tourquing anterior teeth while under normal use.
56. The Ortho-Tain[®] preformed positioner is ideally suited to maintaining optimal overbite retention since the incisors are always maintained in their proper vertical position due to additional plastic material in the incisal region that encourages depression of these teeth and constant eruption of posteriors.

57. The Ortho-Tain[®] preformed positioner retains overjet optimally by being constructed in a super Class I (almost end-to-end horizontal) relation even with only nighttime wear.
58. Treatment time can be shortened by 2 to 6 months with the use of the Ortho-Tain[®] preformed positioner by not having to completely correct the molar relations (can leave the molar relation within 3 mm. from perfection), the overjet (can leave 3 to 4 mm. of overjet remaining) at the end of active treatment. The arches also do not have to be coordinated or the teeth intercusped at the end of active treatment.
59. It is important to completely correct the overbite, incisal inclination (torque), rotations, crowding, posterior space closure and cross bites before the appliances are removed and initiation of positioner use.
60. Remember to use the positioner only in cases where you can anticipate favorable cooperation.
61. Most fixed orthodontic patients have about 2 1/2 years of favorable cooperation and should not be depended upon to wear the positioner actively (2 to 4 hours of exercise daily) for more than 1 to 2 months.
62. Favorable cooperation for 1 to 2 months can be obtained in most patients by getting them to agree to this in advance in exchange for getting their fixed appliances off a few months earlier.
63. If the patient had initial lower incisal crowding or rotation, be sure to retain this correction within 1 or 2 months with either a fixed lingual or lower Hawley retainer.
64. In cases with initial overbite, overjet and crowding, the patient usually will wear a fixed lower incisal retainer or lower Hawley placed after only 1 or 2 months of Ortho-Tain[®] active use in order to properly settle the teeth (#63.), and then continue with the Ortho-Tain[®] positioner only at night passively (for up to 2 years) while sleeping in cases with only overjet correction. In cases with an excess of initial overbite, the patient will wear the positioner on a continued basis during the days with about 1 hour per day wear.
65. In severe initial overbite cases, the patient should wear the Ortho-Tain[®] positioner 1 hour per day (with exercise) and at night for 1 year, then taper off the daytime and night wear over the second year. By the end of this second year, the patient will be wearing the appliance only about 1 night per week and not at all during the days.
66. The Ortho-Tain[®] positioner can be used very favorably in relapse cases where the crowding is no more than 1 to 2 mm., the overbite has relapsed no more than 3 to 4 mm, and the overjet is no more than 5 or 6 mm.

FACTS