

Four Bicuspids Extraction – Open Bite

Suggested Treatment Protocol

Phase	Archwires	Objectives	Duration in Weeks	Interval in Weeks	Notes	Early Light Elastics Begun at Initial Bonding ¹	Guideposts for Next Phase
I. Initial Light-Wire	Damon Optimal-Force Copper Ni-Ti[®] .014 U/L PRN, .013 U/L if crowding is severe or periodontal support is compromised	<ul style="list-style-type: none"> • Begin leveling and alignment • Initiate arch development without RPEs or W-arches • Resolve 90% of rotations • Extrude buccal segments • Begin vertical and PRN, A/P correction. 	10	10	<p>Always place stops anterior to crowding.</p> <p>Use composite buildups on buccal cusps of L6s & L7s to intrude buccal segments.</p>	<p>Quail 3/16"; 2 oz – Triangle – U3 to L3 to L4 – Full time</p>	<p>When 90% of rotations are resolved.</p> <p>Do not rush this Phase. It must be possible to insert the first edgewise wires with minimal active engagement. If not, let the current wire work longer. Avoid the use of any wire "icing" product that would apply too high a force when the wire warms.</p>
	.018 U/L		6 – 8	6 – 8			
II. High-Tech Edgewise	Damon Optimal Force Copper Ni-Ti .014 x .025 U/L 10 weeks into this stage: Take Panorex & reposition brackets. Follow with .018 Cu Ni-Ti if brackets are drastically repositioned.	<ul style="list-style-type: none"> • Complete leveling (of upper arch) while closing bite with elastics² • Complete alignment • Continue arch development • Resolve remaining rotations • Begin torque control • Consolidate minor spacing 3 to 3 	10	10	<p>Typically use power chain under wire to consolidate space U/L 3 to 3. Once all spaces close, transition from power chain to .008 or .010 wire to lace anteriors together.</p>	<p>Quail 3/16"; 2 oz – Triangle – U3 to L3 to L4 – Full time</p> <p>Overlay Parrot 5/16"; 2 oz – Reverse Anterior V – L3 over 1s to L3 – Full time</p>	<p>When all brackets and teeth are aligned.</p> <p>It should be possible to insert the working wires with minimal active engagement. If not, the case is not ready for Phase III. Avoid "icing" products.</p>
	.018 x .025 U/L or PRN, .018 x .025 L .017 x .025 Ni Ti [®] with 20° anterior torque U. ³ See Notes. Follow pretorqued wire with same wire in .019 x .025 for 6 to 8 weeks if more torque desired.		6 – 8	6 – 8			

¹In patients with very thin attached tissue, severe crowding or periodontal issues, waiting to start elastics until the second appointment may help prevent labial gingival recession. ²Allowing staff to engage pretorqued wires is not recommended; wire orientation is critical and it is easy to reverse it inadvertently. ³Because of the prescribed bracket placement protocol, leveling of the lower arch will always demonstrate a slight curve of Spee.

Four Bicuspid Extraction – Open Bite (continued)

Suggested Treatment Protocol

Phase	Archwires	Objectives	Duration in Weeks	Interval in Weeks	Notes	Early Light Elastics Begun at Initial Bonding	Guideposts for Next Phase
III. Major Mechanics	Posted Stainless Steel .019 x .025 U/L	<ul style="list-style-type: none"> Take wax bite; coordinate patient-specific arch form Close extraction spaces Finalize A/P correction Express majority of remaining torque Overcorrect vertical 	20 – 30	8 To preclude too much over-correction, do not allow intervals to extend beyond 8 weeks.	To close spaces, end U/L wires distal to the 6s, leaving 2 mm of wire on which to engage Ni-Ti coil springs. Bend distal loop of springs 90°. Engage .010 ligature wire through mesial loop of spring and pigtail-tie over Post, activating about 10 mm. ³	Kangaroo 3/16"; 4.5 oz – Triangle – U Post ⁴ to L3 to L Post – Full time PRN, if bite still open, overlay Zebra 5/16"; 4.5 oz or PRN, Moose 5/16"; 6 oz – Reverse Anterior V – L Post over U1s to L Post until overcorrected with no centric slide	When case is overcorrected with no centric slide.
	After Space Closure Damon Optimal Force Cu Ni-Ti .018 x .025 U/L – Extend wires to 7s to align them.		8	8	Once all spaces close, lace together (.008 or .010 wire) U/L 3 to 5, then tie back to 6s to avoid reopening space.		
IV. Finishing	TMA [®] .019 x .025 U .017 x .025 L	<ul style="list-style-type: none"> Make final A/P, buccolingual, torque and occlusal adjustments. 	15 – 20	4 – 6 until sectioning wire, then 2	To engage elastics, crimp surgical posts on TMA wires to distribute forces over the archwire. PRN to perfect occlusion, cut upper wire mesial to the teeth that still require better articulation. Adjust posterior interferences with a high-speed handpiece and diamond bur, then polish, PRN.	Zebra 5/16"; 4.5 oz – Posterior V – U6 to L5 to U Post if still CL II; U6 under L4/5 to U Post if CL I – Full time for 8 weeks to prevent relapse Overlay Zebra 5/16"; 4.5 oz Reverse Anterior V – L Post over U 1s to L Post – Full time until socked in, then 12 hours daily (after school and nights) PRN, when sectioning wire, maintain Reverse Anterior V at least at night, but switch from Posterior V to Os-trich 3/4"; 2 oz – Spaghetti –U to L 7 to 3 – Twisted in between. In the anteriors, end on U Post mesial to 3s – Full time	

³Most clinicians find little need for additional posterior anchorage because of the posterior transverse arch adaptation that the Damon System fosters through the first two Phases of treatment. ⁴When engaging elastics in Phase III, use the wire posts to distribute forces over the archwire.