

# Cementation guidelines for Atlantis™ Abutments

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The cementation recommendations found in this white paper are designed to assist doctors in selecting the appropriate cementation protocol for use with Atlantis™ Abutments for various available crown types. The recommendations, based upon the clinical expertise of users of Atlantis™ Abutments, combined with research documentation on cementation protocols, are for reference only and should afford adequate crown retention, sufficient crown strength, and screw retrievability (if necessary). It is the responsibility of each individual clinician to use their own professional judgment in deciding which protocol to use depending on the requirements of each clinical situation.

Type of restoration	Atlantis™ abutment options	Type of cement	Optional modifiers	Retrievability
<b>All gold or metal-ceramic crowns</b>	- Atlantis™ Abument – Titanium - Atlantis™ Abument – GoldHue	<b>OPTION A:</b> Temporary cement	Temporary cement alone or mixture of temporary cement and part Vaseline in 3:1 ratio.	<b>Full</b>
		<b>OPTION B:</b> Shaded or non-shaded resin reinforced cement	Resin reinforced cement <sup>1-6</sup> with a thin film of Vaseline painted on the abutment prior to cementation.	<b>Possible</b>
<b>All-ceramic crowns</b>	- Atlantis™ Abument – Titanium - Atlantis™ Abument – GoldHue	<b>OPTION A:</b> Temporary cement	<b>OPTION 1:</b> Thin film of Vaseline on abutment prior to cementation	<b>Possible</b>
		<b>OPTION B:</b> Shaded or non-shaded resin reinforced cement <i>(Note: Non-shaded recommended for all-ceramic crowns)</i>	<b>OPTION 2:</b> No Vaseline for maximum strength of the crown.	<b>No</b>
<b>All-ceramic crowns</b>	Atlantis™ Abument – Zirconia	Resin reinforced cement <sup>1-6</sup> <i>(Note: Non-shaded recommended for all-ceramic crowns)</i>	<b>OPTION 1:</b> Thin film of Vaseline on abutment prior to cementation	<b>Possible</b>
			<b>OPTION 2:</b> No Vaseline for maximum strength of the crown.	<b>No</b>

**Note:** Option 2 for all-ceramic crowns on the Atlantis abutment in zirconia is a non-retrievable protocol, which maximizes the strength of the all-ceramic crown because the crown will be permanently bonded to the abutment. In this case, should a screw loosen and require re-tightening, the crown may need to be replaced after accessing the screw by drilling into and/or cutting off the all-ceramic crown.

Research shows that cementing all-ceramic crowns with resin-bonded cements provide the strongest restoration. Ceramic crown durability is enhanced by the cementation, crown dislodgement is less than with non-bonded cements, and leakage is the least<sup>1-6</sup>.

Clinicians may prefer to cover the head of the abutment screw with cotton, gutta percha or composite prior to cementation to facilitate retrieval should it be necessary.

## References

1. Komine F; Tomic M; Gerds T; Strub JR Influence of different adhesive resin cements on the fracture strength of aluminum oxide ceramic posterior crowns. J Prosthet Dent 2004 Oct; 92(4):359-64.
2. Segal BS. Retrospective assessment of 546 all-ceramic anterior and posterior crowns in a general practice. J Prosthet Dent 2001 Jun;85(6):544-50.
3. Jokstad A. Ionomer and zinc phosphate luting cements. Int J Prosthodont 2004 Jul-Aug;17(4):411-6.
4. Behr M; Rosentritt M; Mangelkramer M; Handel G. The influence of different cements on the fracture resistance and marginal adaptation of all-ceramic and fiber-reinforced crowns. Int J Prosthodont 2003 Sep-Oct;16(5):538-42.
5. Snyder MD; Lang BR; Razzoog ME. The efficacy of luting all-ceramic crowns with resin-modified glass ionomer cement. J Am Dent Assoc 2003 May;134(5):609-12; quiz 632-3.
6. Gu XH; Kern M. Marginal discrepancies and leakage of all-ceramic crowns: influence of luting agents and aging conditions. Int J Prosthodont 2003 Mar-Apr;16(2):109-16.

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