

Who Do You Believe? Curing Lights

Fast curing with LED, plasma and laser seems to leave white lines for some and not others. What type of curing light do you use, and why?

super2th

Posted: 10/27/2010

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I gave away my plasma arc curing light because I became convinced that “fast curing” caused “white lines” and put undo stress on the tooth causing post-op sensitivity. I am nearly sure it was John Kanca giving the seminar lecture (two separate lectures actually).

Anyway, I’m now convinced that was wrong... unless fast curing with LED is different than fast curing by plasma or laser? The new CR (Clinicians Report) details several high-speed (a few seconds) curing lights. I’m going to pick out one and buy it again. Those major companies (six or so) aren’t wrong.

My favorite now is the Ultra-Lume 5, but I want fast curing so maybe the Valo or one of the others.

Do you belong to the slow cure or the fast cure crowd? ■

ssherv

Posted: 10/27/2010

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I have had a plasma arc light and an LED light for the last nine years. I used to get the white lines until I started to bevel the occlusal surfaces and switched to a clear bonding agent. I cannot part with my plasma arc light. I love that thing. ■

davidhornbrook

Posted: 10/27/2010

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Shervin, How long are you curing with the plasma arc? If you are curing one to three seconds like most of the “plasma arc” light manufacturers recommend (and no one else!), what data are you using to support this very fast cure? ■

Joe Serflek

Posted: 10/27/2010

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I belong to both camps. We use the Valo as recommended by Kanca and full cure the adhesive along with the flowable together for 10 seconds. We then full cure the dentin layers for 10 seconds. The enamel layer is pulsed cured for just a couple of seconds, finished, polished and then final cured for 10 seconds. ■

davidhornbrook

Posted: 10/27/2010

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Do you belong to the slow cure or the fast cure crowd?

John Kanca used to give me a hard time about recommending fast cure with an argon laser in the mid-90s. I hate to admit that I was wrong, but I believe I was. I would really like to see unbiased, published data on the degree of polymerization, not “in-house data from the manufacturer of the Plasma Arc light” or some clinician saying that it “feels as hard as composite that is cured for 40 seconds,” using a one- to three-second cure. Everything I have read from those I trust indicates it is not the ideal way to polymerize resins. I think the stronger lights might obtain a greater depth of cure and somewhat hasten the polymerization, but it does not happen in one to three seconds! ■

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uscdds95

Posted: 10/27/2010

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Tried Sapphire arc light... way too much heat for my taste. I'm now using Kerr's Demi Plus LED light. I light five to 10 seconds several times from different directions. Don't you also get white lines when you don't thin out the bonding agent? ■

Aristotle

Posted: 10/27/2010

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Pulse activation has stood the test of time and the literature:

J Appl Oral Sci. 2008 Feb;16(1):35-42.

Effect of light-curing units and activation mode on polymerization shrinkage and shrinkage stress of composite resins.

Oper Dent. 2004 May-Jun; 29(3):317-24.

Post-gel shrinkage with different modes of LED and halogen light curing units. There are many more.

David's comments were very gracious. He is right – the degree of conversion is less with plasma lights exposing for three seconds. If you're not having trouble it means you're not using the light properly. ■

Rubinsteindds

Posted: 10/27/2010

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Maximum Dental (the endo people) makes a nice LED light which I have been using for about two years. When I test it myself it outperforms my Demetron Optilux by about 25 percent – that is in the same amount of time a 25 percent greater thickness cure. Very informal but I've been happy with it (and no white lines). ■

Aristotle

Posted: 10/27/2010 ■ Post: 11 of 80

The Valo is da bomb. ■

drdjstokes

Posted: 10/27/2010 ■ Post: 12 of 80

Ditto! I picked up a couple after the Ultradent Townie Meeting and absolutely love the light! ■

toofdr1

Posted: 10/27/2010

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I believe John Kanca. I've been pulse curing per John's recommendations for many years now exactly as John taught me. Almost zero post-op pain, no white lines ever and things look great at recall year after year. I'm not changing a thing. ■ dan

ssherv

Posted: 10/28/2010

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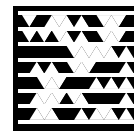
Hi David, I cure for three seconds at half intensity and three seconds at full. My data is all my own work! I have nothing but what I see come through my office, and I'm the only one there.

One thing I do is fill in at least two layers, and the first layer gets a cone burnisher to make it into a V shape against the facial and lingual walls. I do not cure flat composite. ■

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Curing Lights

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