

DIAGNOdent

We Find Decay The Easy Way

One of the most important things we do for our patients is to identify and fill cavities. Since even the smallest spot of decay can threaten the integrity of the entire tooth, finding and filling cavities is the key to preventing further problems of all kinds. Historically, that's why lengthy poking and prodding sessions have been an acceptable, if not very comfortable, part of typical dental exams. However, many people don't realize that these methods of decay detection are only 50% to 75% successful. Cavities often hide along fissure lines, or inside biting or occlusal surfaces. Further, these mechanical exploratory methods are limited to finding only those cavities that are equal to or larger than the probe head. For all these reasons, we've invested in DIAGNOdent: a revolutionary new, thorough means of detecting cavities, so your exam can be fast, easy, and nearly imperceptible.

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{slide=Kavo Diagnodent Overview Video - Click Here}{wvmremote}http://video.biocompare.com/dc/24_512k.wmv{/wvmremote} {/slide}

Laser Reflection Spots Imperfection

DIAGNOdent technology uses a simple laser diode to inspect your teeth, comparing reflection wavelength against a known healthy baseline wavelength to uncover decay. How? First, we aim the laser onto one of your healthy enamel tooth surfaces to give us a benchmark reading. Then, we continue on around your mouth, shining the laser into all suspect areas. As the laser pulses into grooves, fissures and cracks, it reflects fluorescent light of a specific wavelength. This light is measured by receptors, converted to an acoustic signal, evaluated electronically to reveal a value between one and 100, then displayed on a screen. Anytime the laser encounters a surface that reads differently than the healthy baseline value, it stimulates emission of fluorescent light of a different wavelength. A reading of 10-20 indicates some enamel softening, pointing to a potential problem area that merits close monitoring. A reading of 21-100 indicates a definite area of decay requiring a filling.

Early Detection, Precise Correction

Using DIAGNOdent technology allows us to catch more areas of decay sooner and with more precision. Further, it requires no x-rays, and is a relatively comfortable procedure. Not only can it help prevent the spread of decay, but catching decay early means fillings required are simpler and shallower, preserving more of the tooth. This allows us to use minimally invasive filling procedures, such as drill-free air abrasion. Finally, we're able to objectively monitor any suspicious areas without repeated x-rays, harm to tissues, or need for protective measures.

How it works....

The Diagnodent device measures laser fluorescence within the tooth structure.

As the incident laser light is propagated into the site, two-way hand-piece optics allows the unit to simultaneously quantify the reflected laser light energy.

At the specific wavelength that the device operates (655 nm), clean healthy tooth structure exhibits little or no fluorescence, resulting in very low scale readings on the display.

Carious tooth structure exhibits fluorescence, proportionate to the degree of caries, resulting in elevated scale readings on the display.

Over 90% accurate!