# INNOVATION THROUGH TECHNOLOGY & EXPERIENCE



# **OCTOBER 2020**

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# OPEN WIDE!

# A LITTLE NEWS FROM DENTAL CERAMICS OF IOWA CITY

"If everyone is moving forward together, then success takes care of itself."

Henry Ford

#### In Lab Shades

We are following the same protocol for your patient's safety as we did prior to COVID; masks, gloves and more disinfecting going on at the lab. Give us a call or have your patient call us to set up an appointment! We recommend at least 24 hours after their appointment for teeth to rehydrate, or have them set up a time prior to their prep appointment.

### **Precious Metals Continue Their Uphill Climb**

Full Cast Gold Crowns seem to be making a come back! They are the kindest to the opposing dentition, biocompatible and continue to be the standard for long-term durability in posterior restorations. Gold is hovering close to the \$2000/ounce and palladium is around \$2400/ounce. Many of your lower content golds have palladium in them which keeps that price up also. We suggest our 40% gold, which is the same price as our 2% Y+ metal.



# **Suggested Prep Guidelines for Zirconia**

The original advertisements for Bruxer crowns, the first zirconia crowns, were that they were indestructible. These crowns could withstand a hammer, a truck driving over them, a Gorilla stepping on them etc. The common knowledge was that we could put zirconia on any prep and it would not break! The White Steel became very popular as a result and still is! However, sometimes the unthinkable happens; the zirconia crown breaks! There continues to be more documentation that shows that the durability of the crown will decrease if the original recommendations for preps were not accurate, raising the chance of a fracture in the finished crown. Even Dr. Gordon Christensen has stepped in and recommended a chamfer margin at the least.

#### Why Tooth Preparation Design is Important

- Uniform reduction results in optimum ceramic strength
- Adequate reductions leads to better esthetics
- Smooth edges result in lower stress
- Lower stress decreases potential for fracture
- Ceramic restorations require a passive fit
- Scanners read smooth preparations more accurately

#### **TOOTH PREPARATION GUIDELINES**

Uniform circumferential tooth reduction of 1.0-1.5 mm
Circumferential chamfer

Circumferential chamfer Occlusal reduction of 1.5-2 mm Rounded line angles



Reduce lingual of anterior preps with a football diamond to create a concave lingual

Tooth reduction for zirconia crowns is still less than needed for a PFM or All Ceramic Crowns.

Zirconia is very strong, when it's paired with a nice foundation.