

## American Association of Endodontists Response on Biocalex 6/9

The American Association of Endodontists is pleased to provide the following information about the traditional root canal filling known as gutta-percha and a newer filling material called Biocalex 6/9.

It is our understanding that most endodontists, the dental specialists who perform root canal treatment, use gutta-percha to fill root canals. U.S. dental schools accredited by the Commission on Dental Accreditation teach both undergraduate dental students and students in advanced specialty education programs in endodontics that gutta-percha is by far the most commonly used material to fill root canals. Gutta-percha is both structurally and chemically similar to natural rubber latex, differing primarily in crystalline nature and physical properties. Dental gutta-percha points reportedly contain approximately 19-22 percent gutta-percha, 59-75 percent zinc oxide and a variety of other agents including plasticizers, waxes, colorizers, metal sulfates and resins. Since the late 1950s, material compounded in the United States for gutta-percha points has been manufactured from both natural rubber latex and synthetic material. Gutta-percha is dimensionally stable, fills the root canal space without expanding and is placed in conjunction with adhesive cement to ensure complete sealing of the root canal. Many studies have been published in peer-reviewed journals that show gutta-percha is an effective biocompatible filling material that has been used safely with predictable results for over 100 years.

The endodontic filling/sealing paste, Biocalex, was originally marketed in France and was introduced in the United States in 1995. Biocalex consists of heavy calcium oxide powder and liquid ethyl glycol. According to the manufacturer's instructions, the dentist mixes these two ingredients and places the mixture in a moist canal. The product literature states that the mixture forms calcium hydroxide, expands to six to nine times its original volume and penetrates the internal anatomy of the canal. The material can be used as a temporary canal filling between appointments or as a permanent filling. If a clinician intends to use the paste as a permanent filling material, he or she should add zinc oxide. The manufacturer cautions against the use of Biocalex in weakened roots to reduce the chance of root fracture.

The Association cautions practitioners who choose to use this product to exercise due care in light of Biocalex's expansive properties.

We appreciate your interest in dental health.