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AAE members may reprint this position statement for distribution to patients or referring dentists.

About This Document

The following statement was prepared by the AAE Clinical Practice Committee.

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Art and Science of New Materials in Endodontics

AAE Position Statement

The American Association of Endodontists is dedicated to the advancement of the art and science of endodontics through high quality research. The body of knowledge obtained through research should assist AAE members, as well as dentists around the world, to render safe and effective treatment for the public, thus improving public health.

The recommendation for the use of a new material or method of treatment should be based on laboratory, biological and clinical studies. In vitro tests are screening tools to evaluate safety and effectiveness of a proposed method or material. Following demonstration of acceptable biocompatibility profiles, in vivo (usage in laboratory animals) studies are then indicated to confirm safety and efficacy. After obtaining favorable results from in vivo studies, FDA clearance for use in humans should be sought. This will then pave the way for the final phase of evaluation, the human clinical trial. Positive outcomes from clinical trials assure the dentist and patient that the method or material has been shown to be safe and effective in patient care. For currently used methods and materials, a systematic approach to review the evidence relevant to specific clinical questions is encouraged. Following these guidelines will result in the integration of individual clinical expertise with the best available research evidence.

A disturbing trend toward omitting applicable research has become more prevalent in recent years. The absence of adequate research puts the dentist in the position of rendering treatment that may be shown to be ineffective as limitations of techniques and materials become evident in the future. This trend also puts the patient at risk of receiving treatment that may be unsuccessful or detrimental.

For this reason, the American Association of Endodontists recommends that dentists rendering endodontic treatment investigate any claims regarding new materials and methods to ensure that adequate laboratory, biological and clinical studies exist to support their use in patient care. If adequate studies do not exist, it is recommended that the dentist refrain from employing any new method or material until such time that the research is available to support its use.