

Procedures for Whitening Teeth and Factors That Affect Dental Enamel

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Description

Today, the vast majorities of people are becoming more knowledgeable about and concerned in dental aesthetics. Procedures for tooth whitening offer a conservative way to enhance dental aesthetics. These bleaching techniques can be helpful both on their own and in conjunction with other restorative procedures. No matter the method used, tooth whitening refers to the procedure that makes a material's colour resemble a required or standard white. Carbamide peroxide, which releases around one third of its weight as hydrogen peroxide, is principally responsible for the results of tooth bleaching, which is described as chemically induced whitening. There may be a rise in demand for cosmetic dentistry operations as well as higher expectations for treatment success as the general public is becoming more aware of dental aesthetics. Determining the science underlying tooth whitening techniques, their precise recommendations, chances of success, and rates of comeback, potential side effects, and restrictions is therefore important for dental professionals. Iatrogenic discoloration can be brought on by dental operations such pulp extirpation, which causes dentin bleeding, pulpal tissue left behind after root canal therapy, root canal irrigants, or root line restorative materials. A reddish-brown precipitate could form when chlorhexidine and sodium hypochlorite irrigants are used. Professional tooth whitening is the popular option for people who want whiter teeth because it has good aesthetic results and uses safe procedures. The determination of the origin of the colour shift, which is typically categorized as intrinsic or extrinsic, is crucial for the efficacy of bleaching techniques. Extrinsic stains are linked to the deposition of chromogenic substances on the tooth enamel, such as those resulting from the food, smoking, or spontaneous deposit of pigments made by bacteria in the biofilm. Dental trauma, medications like tetracycline and fluoride, ontogenesis disorders like amelogenesis and dentinogenesis imperfect, amelogenesis, and dentinogenesis imperfect, as well as local causes like pulpal necrosis or haemorrhage, poorly done endodontic treatment, or root resorption, are all examples of intrinsic stains.

Once the cause of the stain has been determined, dentists must provide each patient a customized course of treatment that takes into account their needs, goals, dental health, and oral condition. Typically, tooth whitening is done at the dentist's office with

more powerful gels and a shorter application period, or at home with less strong gels and a longer application period, or even combining both methods. To remove extrinsic discoloration, professional hygiene treatments and polishing are carried out using an abrasive paste, a rubber cup, and a slow-speed rotating tool. Extrinsic stains can affect how tooth colour is assessed, yet it has been demonstrated that dental prophylaxis procedures improve patients' perceptions of how white their teeth are. Patients may choose from a variety of Over-The-Counter (OTC) tooth whitening products and use them on their own. Whether a product can be sold over the counter depends on the amount of bleaching agent that it contains. The various regulatory agencies in each country set the limits on the permitted concentration. The formulations for over-the-counter tooth whitening products include, among others, dentifrices, mouthwashes, intraoral strips, varnishes, and gels. Abrasives have shown to be the most efficient ingredient in whitening dentifrices throughout history. These work by getting rid of and stopping the development of extrinsic stains. The degree of whitening that may be accomplished using these products is constrained by rules on the maximum permissible abrasive content due to the potential impact that abrasive particles might have on the dentition. The effectiveness of whitening toothpastes that include low concentrations of hydrogen peroxide or carbamide peroxide is constrained by the short period of contact with the teeth while brushing in addition to the low concentration. Bleaching in conjunction with using whitening toothpaste at the same time as well as after bleaching helps to speed up the whitening process

Dentifrices for teeth whitening now contain the pigment blue covarine. This theoretically whitens enamel by painting it with blue pigment in order to produce a visual effect of whiteness. The amount of bleaching agent used, the length of exposure, and the kind of intrinsic stain are all variables that could impact how quickly teeth whiten. With an increase in bleaching chemical concentration and exposure duration, tooth whitening with carbamide peroxide or hydrogen peroxide becomes more effective. Severe doxycycline staining responds to chemical bleaching more slowly depending on the type of staining. The length of the teeth - whitening process increases with the initial shade of the teeth. Gary, blue, or other stains are less bleachable than yellow stains.