

Survey: Most effective dental braces are least attractive

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When it comes to the attractiveness of orthodontic braces, less metal is better, according to a recent survey.

The study of the public's attitude about the attractiveness of various styles of braces indicates that the types of dental appliances with no visible metal were considered the most attractive. Braces that combine clear ceramic brackets with thin metal or clear wires were a less desirable option, and braces with metal brackets and metal wires were rated as the least aesthetic combination.

"The paradox is that the more aesthetic these dental appliances are, the more difficult they are to manage for the orthodontist," said senior study author Henry Fields, professor and division chair of orthodontics at Ohio State University. "But those are what people like the most."

The survey did not ask respondents about the attractiveness of decorative and colorful elastic modules that attach the wires to the braces, which have become popular among some teen-agers in the past few years.

The study findings were published in a recent issue of the *American Journal of Orthodontics and Dentofacial Orthopedics*.

Fields and colleagues questioned 200 adults using a computer-based survey that presented standardized images of teeth with a variety of orthodontic appliances. The images did not show the patients' faces, so the attractiveness of the person wearing the appliances was not a factor.

Respondents were asked to rate the appliances using a range from "extremely unattractive" to "extremely attractive" on a scale of 1 to 100.

The responses fell into three clear categories, Fields said. The stainless steel appliances were considered the least attractive, with average ratings hovering between about 25 and 40 on the 100-point scale. Ceramic appliances, which are often clear or tooth-colored and less visible than metal, received average ratings of between about 55 and 70 on the scale. Ceramic brackets with clear or white wires were considered more attractive than ceramic brackets with metal wires. Clear tooth trays and teeth with no visible appliances ranked as the most attractive, with the average of most scores exceeding 90. Appliances called lingual braces are invisible because they are applied behind the teeth, creating the appearance of appliance-free teeth.

The researchers collected demographic information on the adult respondents, but any differences in demographic influences were insignificant in the overall analysis.

"The general trends of appliance attractiveness are universal," Fields said. "The stainless steel that we like to use, which is the most durable and efficient, is often ranked the lowest in attractiveness. These braces don't wear out and you can get total control with them.

"The most aesthetic ones, the trays, have limitations on the types of movements you can make and forces you can deliver, and the efficiency. And the ceramics sometimes have breakage problems, and they tend to just be a little bit more delicate."

Standard braces consist of metal or ceramic brackets that are cemented to each tooth. A metal wire is laced through each bracket to exert force on the teeth to correct their placement. Braces are used to tip teeth in one direction or another, to rotate one or several teeth, or to shift the

location of a tooth forward, backward, sideways, up or down in the mouth. Each kind of correction requires specific manipulation of the wires in the brackets, and some require specially shaped wires to perform the task. Fields said the ideal is to move teeth about 1 millimeter, a little less than the thickness of a dime, every four weeks.

The clear tray appliances reposition multiple teeth in tiny increments of about a quarter of a millimeter every two weeks, he said. Patients receive an assortment of trays that they change every two weeks. They wear the trays all day and night, removing them to eat and brush their teeth.

Adults make up about one in four patients being fitted with braces, Fields said. And adults may be more concerned about aesthetics of braces than are adolescents, who, if they require braces, typically get them between the ages of 10 and 13.

Fields said some kids tend to go a different route, thinking of their braces as accessories that should be enhanced rather than hidden.

"Some of the kids are going for braces made in the shape of a star, or have colors put on the ties that hold the wires to their brackets," he said. "Some people are decorating their braces."

He and colleagues are also exploring attitudes about how much patients are willing to pay for more expensive dental appliances. The more aesthetically pleasing options often are more costly, as well. The group's data suggest that adults are willing to pay several hundred dollars extra for more attractive appliances for themselves or their children.

Source: Ohio State University

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