

Computer program useful tool in dental care

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Gunnel Hänsel Petersson at Malmö University in Sweden has received an award for her studies of Cariogram, a computer program created in Malmö to assess patients' risk of developing tooth decay, dental caries. The program was constructed in 1997 by Professor Douglas Bratthall at the Faculty of Odontology at Malmö University College in Sweden. Today it has been translated into twelve languages and is attracting ever greater interest in other countries. Gunnel Hänsel Petersson's study is the first evaluation of the program.

“Caries occurs in a complicated interaction involving various factors built into the Cariogram Program. The program makes it easier for dentists to initiate the proper treatment to prevent caries,” explains Gunnel Hänsel Petersson.

There are a total of some ten risk factors whose respective importance is weighted in relation to each other: the number of earlier dental cavities, use of fluoride, the buffering capacity of the saliva, medicines, the number of bacteria in the mouth, diet, etc. The information is fed into the computer, and the program calculates the risk of caries. The patient's risk profile is presented graphically in the form of a circle where sections of varying color and size represent the risk factors-the greater the green area, the greater the chance of avoiding caries.

The Malmö researcher's study is based on 600 individuals who had been placed in various risk groups following the original examination. At follow-ups two and five years later it was shown that the distribution reflected the actual outcome. More than 90 percent of those with the

highest risk, for instance, had developed new cavities.

“Cariogram is thus a useful tool in estimating the risk of children and older adults developing dental caries. But dentists are advised not to place blind faith in the computer program; they should rather use it as a complement to their clinical assessment,” says Gunnel Hänsel Petersson.

The idea is that it should be possible to use Cariogram around the world. It can be downloaded for free from the Internet in Russian, German, Thai, Portuguese, French, English, etc.

The prize of SEK 30,000 from the Patent Money Fund for prophylactic research in dentistry is one of the largest for odontological research in Sweden.

Source: Vetenskapsrådet (The Swedish Research Council)

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