Sharing Scientific Knowledge

It's time for a change, but what's the best way to proceed?

Dental Side Effects

The results of a study published in the September/October 2004 issue of General Dentistry suggests that treatments for mood disorders may cause adverse dental side effects. The clinical, peer reviewed journal is published by the Academy of General Dentistry. Medications used in treatment can cause xerostomia and a higher rate of dental caries and periodontal disease. It is estimated that approximately 15% of adults face mood disorders—depression or bipolar disorder are common—at some point during their lives. Early diagnosis and treatment can significantly reduce the risk of suicide from these disorders. Left untreated, major depression usually lasts eight or nine months. With treatment, patients usually begin to feel better and rid themselves of suicidal thoughts within one to three weeks. Approximately 60% of those who suffer from bipolar disorder notice improvements when psychotherapy and medication are used together for treatment.

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Glasgow Scientists Go 3-D

A new technique will allow three-dimensional pictures of teeth to be made while patients wait. The images would help dentists detect signs of tooth decay before the damage gets out of hand. Lead scientist Simon Poland from the Institute of Photonics at the University of Strathclyde worked with colleagues at the University of Dundee and Strathclyde Dental Hospital to forge a new application of an existing technique. Using structured light, which is a beam of light in a grid pattern, individual slices through a 3-D object are obtained and put together to form a complete picture. Poland’s team are the first to apply the method to human teeth and successfully produce a 5-D image of a tooth’s diseased area. Poland’s team is now doing research in order to develop a kit for dental practices that will be fast and simple to use. This would be a powerful diagnostic tool capable of informing dentists about the size, shape, and progression of tooth decay.

What Do They Expect?

Opinion polls confirm that the public generally regards dentists as being honest and ethical. Given today’s service-oriented world, Dr. Farran explains why dentists need to know in order to maintain their image in the eyes of patients.

Science & Research

What Is Beauty?

Which mechanisms work together when we judge someone as being beautiful, plain or ugly? What characteristic features of a person’s appearance leads to this decision? Join Dr. Hofel for Part II of her article on the topic of beauty.

Trends & Application

What’s the Difference?

If you’ve ever wondered about the different generations of adhesives, this article by Dr. Freedman and Dr. Leinfelder will help set the record straight. Here you’ll learn about the chemistry involved in heretofore bond strengths and common problems.

Meetings & More

Welcome to Yokohama!

Take advantage of our special today Show Preview for the Japan Dental Show, which will be held from 29-31 October 2004. Get a taste of the latest products that will be featured and figure out how to incorporate our traveler’s tips into your schedule.

Dental Tribune International

The Australian Dental Association (ADA) has accused the Government Coalition and the opposition Labour party for ignoring the nationwide oral health crisis in Australia in their federal election health debate. In a recent press release, ADA President Dr. David Houghton, says Australians are the second worst of all OECD countries when it comes to measures for adult oral health. “Oral health is of very low concern to the government, delivery of dental care and not dealt with,” he said, “but investment in dental care will have the flow-on effect of reducing later general health expenditure.” Combined State and Territory expenditure on public dental care in 2002/03 was about 270 million AUD. The Commonwealth claims to have allowed the States to keep an additional $2.7 billion from the growth in the number of private health insurance contributors, and that it puts billions into the health systems of the States and Territories. However, there is no actual requirement for the States or Territories to spend any of this Commonwealth money on dental treatment.

“Federal, State and Territory governments must improve coordination of care and funding to address the delivery of efficient, economical oral care. They must guarantee that funding earmarked to deal with the provision of dental services is expended on delivery of dental care and not diverted to other activities,” Dr. Houghton said. “Waiting lists for public dental treatment in most, if not all, States and Territories are unacceptably long.” The situation is explained in an ADA White Paper, “Australia’s National Oral Health Plan 2004–2015.”

Dental Tribune International

By Robin Goodman

Every year the world of scientific publishing publishes some 2.5 million articles within the pages of 24,000 journals. The majority of these journals are ‘peer reviewed’, a term you may already be familiar with. During peer review, an article is sent to two or three independent experts who evaluate it. Their comments are given to the author, sometimes anonymously, who then has the opportunity of making changes before publication. The peer review process is intended to establish credibility for the work presented in the paper, but it is not intended to determine if it is ‘right.’

Scientists are human of course, and the confidence and trust we insist in them does make them infallible. The Committee on Publication Ethics (COPE) monitors violations such as plagiarism, conflicts of interest, duplicate publication, bribery, and a lack of proper ethical clearance. The Committee’s 2003 Annual Report documented 29 violations such as these encountered by medical journal editors.

The most common violation was duplicate publication, pursued in an effort to increase total publication numbers. It entails having the same paper printed in more than one journal. A conflict of interest example would be authors who wrote about passive smoking and failed to mention that some of their funding came from the tobacco industry.

While an editor will usually report a violation to ethics committees or the researcher’s employer, disciplinary action is not mandatory. COPE has recommended a code of ethical conduct as an aid for editors. The editors would voluntarily sign and abide by the code. This code is currently being drafted and will ultimately define unacceptable activities, clarify an editor’s duty, and present disciplinary procedures.

What the Public Knows

In spite of people who seek to get ahead dishonestly, the system of peer review seems to achieve its aims. A recent survey by MORI, a market research company in London, found that 71% of respondents had no idea what peer review meant. Common sense, however, allowed them to identify the peer review method as a suitable control measure. Some respondents (40%) felt that more rigorous controls should be imple-