WASHINGTON, USA: US health authorities have updated their guidelines for fluoride in drinking water and now recommend an optimal fluoride concentration of 0.7 mg/l. As Americans today have greater access to fluoride in the form of toothpaste and mouthrinse and owing to the increasing incidence of fluorosis due to excess fluoride, the Department of Health and Human Services sought to replace its previous recommendations that were issued in 1962.

Since the early 1960s, the practice of adding fluoride to public drinking water systems has grown steadily in the US. Nearly all water fluoridation systems in the US have used fluoride concentrations ranging from 0.8 to 1.2 mg/l. With the recent update, however, this will be reduced by 0.1–0.5 mg/l, and fluoride intake from drinking water alone will decline by approximately 25 per cent. The total fluoride intake will be reduced by about 14 per cent.

According to the department’s report issued on 27 April, the new optimal concentration of 0.7 mg/l was chosen to maintain caries prevention benefits, but reduce the risk of dental fluorosis.

Although a number of studies have found that community water fluoridation has led to a significant decline in the prevalence and severity of tooth decay, data from the 1999–2004 National Health and Nutrition Examination Survey and the 1986–1987 National Survey of Oral Health in US School Children indicate that over 20 per cent of people aged 6–49 have some form of dental fluorosis.

Today, nearly 75 per cent of Americans who are served by public water systems receive fluoridated water. In 2012, the Centers for Disease Control and Prevention estimated that approximately 200 million people in the US were served by 12,341 community water systems that added fluoride to water or purchased water with added fluoride from other systems.

Artificial fluoridation of drinking water remains controversial as a public health measure, as it has been suggested that excess fluoride may have adverse health effects. For instance, it has been associated with neurodevelopmental delays in children and with the development of attention deficit hyperactivity disorder only recently.

In contrast to fluoridation policy in the US, many western European countries, including Austria, Belgium, Finland, Germany and Sweden, do not fluoridate their water supply. Other European countries, such as Ireland and the UK, currently add fluoride to drinking water at levels ranging from 0.2 to 1.2 mg/l.
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An interview with Nepalese dentist Dr Sushil Koirala

"We are still pretty much in shock"

In one of the worst earthquakes in over 80 years, more than 10,000 people are believed to have died in the Federal Democratic Republic of Nepal. Living in and practising dentistry in the capital of Kathmandu, dentist Dr Sushil Koirala has been directly affected by the disaster. Dental Tribune had the opportunity to talk to him briefly about the situation in the country and how the international community can help it to overcome the humanitarian crisis.

Dental Tribune: The earthquake on 25 April had a devastating effect on your country’s infrastructure and its people. What is the situation currently in Kathmandu, and how have you been affected personally?

Dr Sushil Koirala: The situation in Kathmandu at present remains very difficult owing to the extensive damage to many public buildings, government offices and schools. Nearly 7,500 lives have been lost and 14,500 people have been injured. Those who survived the earthquake are traumatised.

While physically my family and I are fine, we are still pretty much in shock. My children are very distressed because they were alone at home during the first episode of the earthquake. Some of my staff from the hospitals and clinics lost their houses and Sindupalchowk districts of Nepal’s Central Region, as well as the Gorkha District of its Western Region. Have you received any correspondence from the dental community?

Regardless of the efforts by the Nepalese army, police and Red Cross Society, as well as national and international organisations, which are working 24/7, the manpower and supplies are still felt to be inadequate. In your opinion, how will this disaster affect the infrastructure of your country in the long run?

Regardless of the efforts by the Nepalese army, police and Red Cross Society, as well as national and international organisations, which are working 24/7, the manpower and supplies are still felt to be inadequate. In your opinion, how will this disaster affect the infrastructure of your country in the long run?

Nepal’s development budget depends mainly on foreign aid. Rebuilding all the infrastructure affected by the earthquake will require an estimated US$2 billion. The government plans to meet this mainly through foreign and international funding. However, damaged infrastructure will definitely affect the economic growth of Nepal negatively.

When I will be able to start practising again depends on when all my staff are mentally ready for work. Daily life in Kathmandu is still very stressful, as there are frequent aftershocks and people are still terrified. Under these conditions, I do not expect people will come for general dental treatment, except in the case of an emergency.

What do you consider the most important to improve your situation, and how can the international dental community help?

More than 95 per cent of houses and infrastructure have been damaged in the affected villages, so the rehabilitation phase for the earthquake victims is going to be a great challenge for our country. I personally feel that in order to overcome this difficult time our country needs support from each individual and professional in Nepal. We have, therefore, started a humanitarian project, the Dental Community for Humanity—Nepal Earthquake Relief Project, under the umbrella of the Punyaaran Foundation, a charitable and non-profit organisation dedicated to supporting people most in need. This project aims to support poor children living in these remote villages in particular. I humbly appeal to the international dental community to support this cause. Please, with your donations and support, we can bring back the smiles of our poor children.

Thank you very much for taking the time and all the best for the future.

Editorial note: Dental Tribune spoke with Dr Koirala in early May. Since then Nepal has experienced a number of aftershocks. He and his family are in safety.

Mark looking at destruction caused by the 25 April earthquake in the Nepalese capital Kathmandu. Damages are estimated at US$2 billion. © Narendra Shrestha/EPA

"Daily life in Kathmandu is still very stressful, as there are frequent aftershocks and people are still terrified."

I am glad to have received many e-mails with best wishes and prayers from our dental friends around the world. It is so gratifying to know that many of them have pledged their support of the earthquake victims of Nepal. Some dental manufacturers have shown keen interest to help us in the rehabilitation of children who have been affected.

Despite an immediate response from India and Western countries, relief efforts seem to be insufficient according to reports. What is your impression?

International communities have offered immediate support and we really appreciate their help. However, 39 of the most affected villages are in remote locations with mountainous terrain. The relief work, there-

For more information on how to support the Dental Community for Humanity project, please contact Dr Koirala at drsushilkoirala@gmail.com.