Europe Ticker +++



Study on repairing damaged tooth surfaces

Could keratin protect enamel?

A research team at King's College London has discovered a way to naturally support the repair of damaged tooth surfaces. The key lies in a protein familiar to us all: keratin. Found in hair, skin, and nails, keratin can be extracted in large quantities from biological waste materials. The researchers used keratin isolated from wool. When applied to the tooth surface, the keratin reacts with the minerals in saliva to form a crystal-like layer that closely resembles natural enamel. This layer acts as a protective barrier while sealing sensitive areas where nerves are exposed.

This approach differs significantly from previous methods. While fluoride can slow down demineralisation, it cannot reverse it. Composites and other filling materials serve a functional purpose yet remain foreign bodies in the mouth. Keratin, by contrast, integrates directly into natural biological processes. The results were published on the King's College website and in *Advanced Healthcare Materials*. The study was led by Dr Sherif Elsharkawy, with Dr Sara Gamea as first author.

Source: Dental Tribune International

Support through AI-powered robotic assistants

Robotics in dental surgery

The first AI-supported robotic assistants are already being used to support implant procedures and other surgical interventions. These systems rely on AI to drill or cut with millimetre precision. This technology is already in use in specialised clinics, particularly in the USA and Asia. The first and currently only FDA-approved robotic system for dental implantology is called Yomi. Yomi provides haptic guidance during implant insertion, helping to ensure the planned implant position and angulation is implemented with precision. This is intended to minimise the risk of deviation and enhance safety during complex procedures.

The legal framework for AI-based robotics in dental surgery is complex and evolving—especially in light of the recently adopted EU Artificial Intelligence Act (AI Act). Strict requirements apply to AI systems classified as high-risk, such as AI-based medical software or AI systems used in hiring processes. These requirements include risk mitigation, high-quality datasets, clear user instructions and human supervision. AI systems that pose a clear threat to fundamental rights are banned. This includes systems that allow authorities or companies to assess individuals' social behaviour (social scoring).

The EU aims to take a global leadership role in ensuring the safety of AI. By developing a robust regulatory framework grounded in human rights and core values, the EU intends to foster an AI ecosystem that serves the greater good, offering improved healthcare, safer and cleaner transport systems, and more efficient public services for citizens.

Source: EU AI Regulation of 1 August 2024; FDA

EU Council presidency passes to Denmark

Security and competitiveness at the forefront

Denmark assumed the rotating presidency of the Council of the European Union on 1 July 2025, taking over from Poland for a six-month term. The Scandinavian country is prioritising two overarching political objectives: security and competitiveness. Denmark emphasises the urgent need to strengthen Europe's defence capabilities by 2030 at the latest. At the same time, it aims to reduce economic pressure by reducing regulatory burdens to promote innovation, productivity, and competitiveness.

Denmark believes that health is a vital part of Europe's resilience, security of supply, and long-term competitiveness. The Danish presidency will focus on four central health policy areas:

1. Concluding negotiations on the so-called Pharmaceutical Package, which aims to improve access to medicines, promote innovation, and speed up authorisation procedures.
2. Continuing discussions on the Critical Medicines Act, which seeks to strengthen supply chains for essential medicines, reduce external dependencies, and prevent shortages.
3. Enhancing the resilience of health systems to cope with human-made crises and natural disasters.
4. Advancing international agreements under the WHO's umbrella, such as the Framework Convention on Tobacco Control and the Pandemic Accord.

Regarding the internal market, the Danish presidency intends to prioritise reducing bureaucracy and promoting digitalisation, particularly by digitalising administrative processes to encourage intra-European mobility and by advocating for increased EU investment in digital infrastructure and innovation.

Source: German Dental Association (BZÄK)

Access to dental care

Where Europe is falling short



In several parts of Europe, access to dental care remains a challenge—and not only in remote regions. According to the latest Eurostat figures, more than 6% of people in the EU aged 16 and over report being unable to access to dental care in 2024. The countries with the highest unmet dental care needs were Greece (27.1%), Latvia (16.5%), and Romania (16.2%). The countries with the most secure access to dental care were Malta (0.4%), Germany (0.9%) and Croatia (1.1%). Key barriers include financial hardship, long waiting times and travel distance to practices. In 23 out of 27 EU countries, cost was the most common reason for leaving toothache untreated.

Sources: Euronews, 3 September 2025; EuroStat