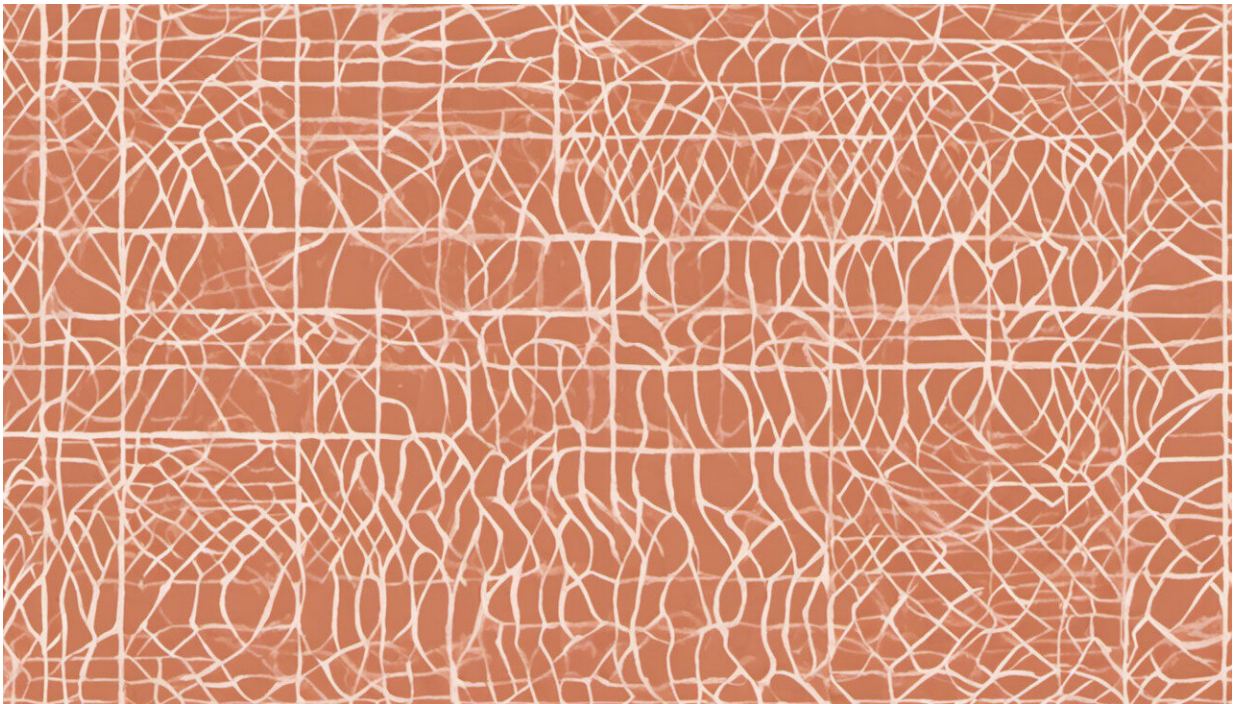


Sensory technology provides daily dietary guidance

December 10 2013



Credit: AI-generated image ([disclaimer](#))

An innovative new way of providing personal behavioural guidance to children and young adults could play a crucial role in tackling the ongoing obesity epidemic. The EU SPLENDID project, which is being coordinated by the Aristotle University of Thessaloniki in Greece, will use high-tech sensors to record eating habits and physical activity across

the course of a day, and provide valuable - and accurate - information to users and health-professionals.

The emergence of [obesity](#) is a major health concern, causing 2.8 million deaths among adults worldwide each year. Studies have shown that children who are obese are likely to be obese as adults, making them more susceptible to adult [health problems](#) such as heart disease, type 2 diabetes, stroke and several types of cancer.

Traditional weight-loss interventions have in the past relied mainly on people's memory of what they ate for dinner, and how many minutes they worked out. Researchers have long known however that this method can be unreliable since people often forget details, or unconsciously give incorrect information.

The SPLENDID project aims to address this through the use of cutting-edge technology. The new sensory devices are being designed in labs or created with off-the-shelf parts. Although some similar instruments are already on the market - including a model that tracks calories burned by measuring motion, sweat and heat - the devices currently in development through the SPLENDID project will be more sophisticated. They will feature more precise electronics and sometimes even video cameras.

A key advantage of the new system will be the provision of instant and personalised feedback. The high-tech sensors will deliver real-time data to Smartphone and web-based interfaces, highlighting risk behaviours and helping users to change their daily habits and lifestyle. By doing so, the SPLENDID project hopes to communicate directly to young people most at risk from developing obesity and prevent the onset of serious health-related problems.

Obesity is of course just one side of the issue. Children and young people are also susceptible to other [eating disorders](#), such as bulimia and

anorexia, which can lead to serious health problems. Anorexia nervosa is characterised by extreme food restriction to the point of self-starvation and excessive weight loss.

The sensory technology and instant feedback being pioneered by the SPLENDID project can also be used by individuals who might be susceptible to such eating disorders. Behavioural patterns in both obesity and eating disorders usually emerge early in life, and need to be managed immediately. This is why the project is being targeted at [young people](#) and children.

The SPLENDID consortium brings together expertise in neuroendocrinology, clinical practice, microelectronics, signal processing and personalised health management. European partners come from Greece, the Netherlands, Spain, Sweden and Switzerland, and the project involves the participation of the International Engelska skolan school of Sweden, which has an established interest in improving the [health](#) of students.

More information: splendid.ee.auth.gr/

Provided by CORDIS

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