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High-dose vitamin D preparations unnecessary

Taking daily vitamin D supplements in doses of 50 micrograms (μg) or 100 μg is not necessary from a nutritional point of view. Although occasional consumption is unproblematic from the BfR's point of view, the current study data indicate a possible risk of overdosing if such high-dose preparations are taken on a daily basis and in the long term. Consequences may include increased calcium levels in blood serum (hypercalcaemia), which can manifest as fatigue and muscle weakness, vomiting and constipation or cardiac arrhythmia and vascular calcification. Persistent hypercalcaemia can lead to deposits and calcification in the kidneys and, ultimately, to a decline in their function. According to the BfR, given an adequate length of time spent outdoors with corresponding exposure of the skin to sunlight, plus a balanced diet, individuals can attain sufficient supply of vitamin D without any preparations. People who are comparatively more likely to develop severe vitamin D deficiency should seek medical advice before taking these kinds of preparations.

More information:
BfR Opinion No. 035/2020 of 31 July 2020

Do plasticisers make you fat?

Every day, consumers ingest many different potentially harmful substances, particularly through food, including those that can disturb the hormonal balance. These kinds of chemical compounds are referred to as endocrine disruptors and can, for example, interfere with growth, developmental- or reproduction processes. Moreover, recent studies suggest that they also affect metabolic processes, such as lipid or energy metabolism, and that they might be associated with diseases like obesity and diabetes. Given the lack of validated test methods to determine metabolic endocrine disruption, researchers at the BfR are conducting experiments with human liver cells as part of the collaborative project EDCMET (Metabolic effects of Endocrine Disrupting Chemicals: novel testing METhods and adverse outcome pathways), funded by the EU Commission. The project aims to characterise metabolic effects and develop validated test methods.

More information:
Küblbeck, J. et. al. 2020. The EDCMET Project: Metabolic Effects of Endocrine Disruptors. *Int. J Mol Sci.* 21(8): 3021. DOI 10.3390/ijms21083021



Assessing risks in the cloud

Mathematical models and simulations are becoming increasingly important in risk assessment. A research team at the BfR has developed a first standardised exchange format for risk assessment models. The Food Safety Knowledge Exchange (FSKX) format allows experts to exchange risk assessment models and simulation results between different software solutions and online platforms. Behind this is the international research project AGINFRA+ (AGricultural INFRAstructure Plus), funded by the EU Commission, within the framework of which a cloud-based online platform was developed between 2017 and 2019. So-called "virtual research environments" enable scientists to share mathematical models with others and use them online. The platform therefore functions as a central access point for developing and using risk assessment models.

More information:
<https://aginfra.d4science.org>