A European evidence-based guideline for the prevention of type 2 diabetes.

The prevalence and socioeconomic burden of type 2 diabetes (T2DM) and associated co-morbidities are rising worldwide. This guideline provides evidence-based recommendations for preventing T2DM. A European multidisciplinary consortium systematically reviewed the evidence on the effectiveness of screening and interventions for T2DM prevention using SIGN criteria. Obesity and sedentary lifestyle are the main modifiable risk factors. Age and ethnicity are non-modifiable risk factors. Case-finding should follow a step-wise procedure using risk questionnaires and oral glucose tolerance testing. Persons with impaired glucose tolerance and/or fasting glucose are at high-risk and should be prioritized for intensive intervention. Interventions supporting lifestyle changes delay the onset of T2DM in high-risk adults (number-needed-to-treat: 6.4 over 1.8-4.6 years). These should be supported by inter-sectoral strategies that create health promoting environments. Sustained body weight reduction by ≥ 5% lowers risk. Currently metformin, acarbose and orlistat can be considered as second-line prevention options. The population approach should use organized measures to raise awareness and change lifestyle with specific approaches for adolescents, minorities and disadvantaged people. Interventions promoting lifestyle changes are more effective if they target both diet and physical activity, mobilize social support, involve the planned use of established behaviour change techniques, and provide frequent contacts. Cost-effectiveness analysis should take a societal perspective. Prevention using lifestyle modifications in high-risk individuals is cost-effective and should be embedded in evaluated models of care. Effective prevention plans are predicated upon sustained government initiatives comprising advocacy, community support, fiscal and legislative changes, private sector engagement and continuous media communication.