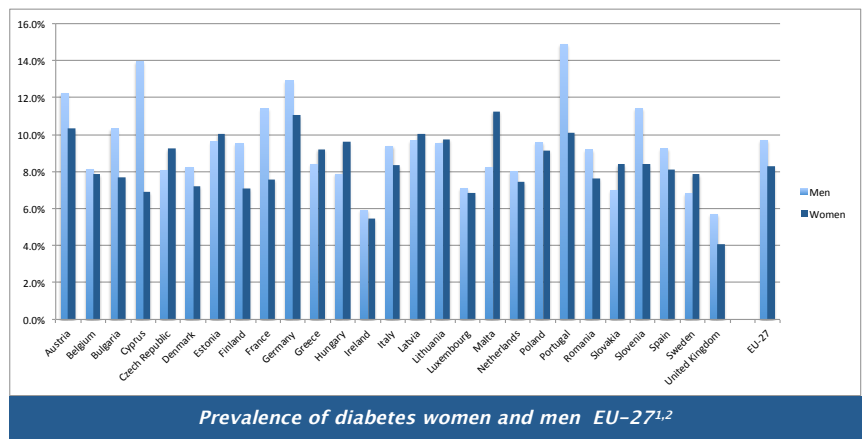


Diabetes: The Basics

Diabetes is a metabolic disease of elevated insulin levels. Insulin regulates blood sugar levels. Elevated insulin, hyperglycaemia, can occur in uncontrolled diabetes and causes serious damage, especially to nerves and blood vessels. Type 1 diabetes occurs when the pancreas produces insufficient levels of insulin; its cause and preventative measures are unknown. Type 2 diabetes occurs when the body ineffectively uses insulin and often results from excessive body weight and lack of exercise.³



Diabetes: Why Gender Matters

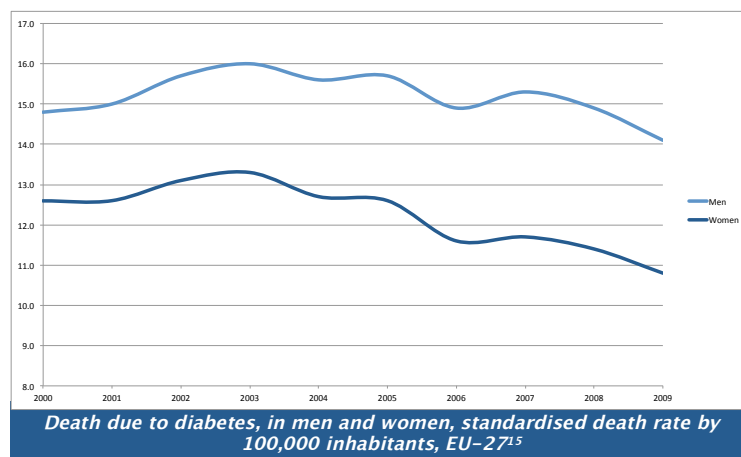
Internationally, diabetes is the 9th leading cause of death in women.⁴ Diabetes is now one of the most common non-communicable diseases globally. The prevalence of diabetes is increasing in every country across Europe. For both men and women, the proportion of people with diabetes increases with age.⁵

Incidence of diabetes in women is outpacing that of men. Women live longer and are less physically active than men, both risk factors for diabetes. There are also higher increasing rates of obesity and smoking in women than in men. Ethnic minorities and women have increased risks of developing diabetes.^{6,7}

Middle-aged men are at higher risk than middle-aged women of developing type 2 diabetes. A Glasgow University study warns that men are more prone to develop diabetes at a lower Body Mass index than women.⁸ However, there is a higher percentage of all-cause mortality in adults—ages 20-79—attributable to diabetes in women than in men in Europe in 2011.⁹

Diabetes, both type 1 and 2, has an effect on women's sexual and reproductive health. Women with diabetes have twice the risk of sexual dysfunction as those without. Diabetes can increase the risk of vaginal dryness, infections (specifically yeast), vaginal tightness, and trouble reaching orgasm in women. In addition, the birth control pill can lead to heightened risk of blood clots in women with type 2 diabetes.^{10,11}

Diabetes is linked to increased rates of colorectal, liver and pancreatic cancers. Type 2 diabetes has been connected to increased breast cancer; women 55 and older with diabetes were 30% more like to get a breast cancer diagnosis than women without.¹²



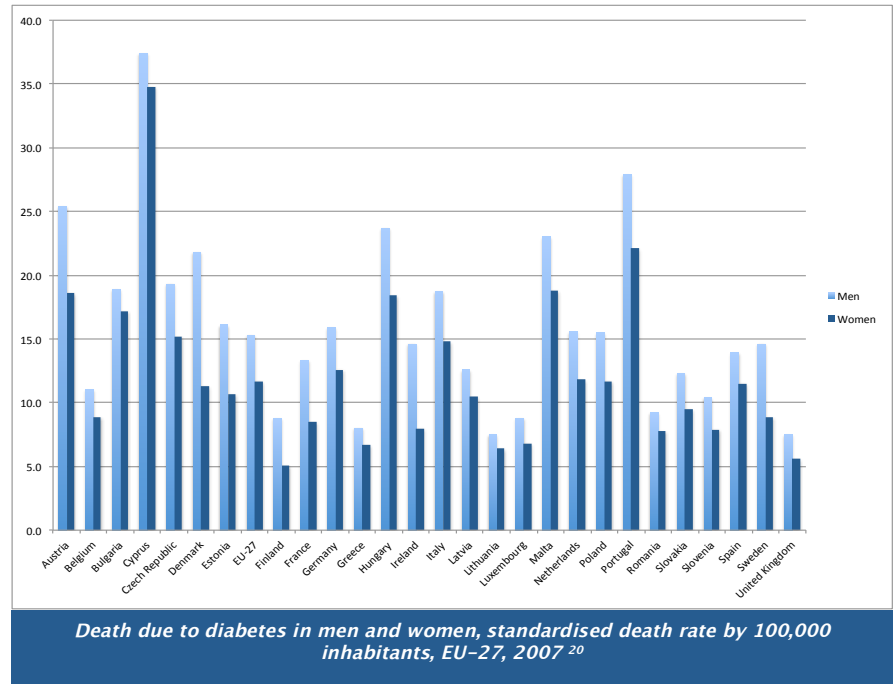
Socio-economic Status, Gender, and Diabetes

Throughout Europe, low education levels are correlated with higher prevalence and higher rates of mortality from diabetes. Women who have a low educational level have higher mortality rates from diabetes than men with low education in Europe.¹³ Thus, inequalities in diabetes prevalence are higher and statistically more apparent in women than in men in Europe.¹⁴

WOMEN AND DIABETES IN THE EU

Cardiovascular Disease, Women and Diabetes: The Interaction

In the last 30 years, mortality rates for men with diabetes have declined; but not for women.¹⁶ Diabetes is associated with a higher coronary heart disease mortality in women compared with men.¹⁷ Studies have shown that women with type 2 diabetes receive less prevention and management of cardiovascular disease than men.¹⁸ Pre-menopausal women have a lower risk of heart disease than men of the same age. All women, regardless of age, who have diabetes have an increased risk of heart disease as it cancels out the protective benefits of hormones.¹⁹



Medical studies have found that post-menopausal middle-aged and older women who take cholesterol-lowering statin drugs have a heightened risk of diabetes. Although the risk of stroke and heart attack, mitigated by statins, outweighs the risk of diabetes, older women who took statins were at a 48% higher risk of developing diabetes when controlling for other confounders.²¹ Previous studies have shown that statins in men increase their risk of diabetes by 10-12%. Reasons for the increased risk are not completely understood, though it is thought it could be linked to statin effects on the liver and muscles.²²

Diabetes and Pregnancy

Women with types 1 and 2 diabetes who have uncontrolled or undiagnosed diabetes during pregnancy are at increased risk of complications during pregnancy which can affect mother and child health. Such complications can range from miscarriage to premature or stillbirth to serious birth defects to the brain, spine, and heart. Infants are more likely to be obese or overweight later in life.^{23 24} Uncontrolled diabetes may make the baby grow very large which can cause complications in delivery for mother and child. Preeclampsia is also more likely in these women than in women with controlled diabetes. This can lead to stroke and seizures.²⁴

Gestational diabetes mellitus (GDM), a form of diabetes that develops in pregnancy, increases the risk of perinatal complications for both mother and child. These women and their infants are at heightened risk of developing type 2 diabetes. Half of women with GDM develop Type 2 diabetes within five to ten years after pregnancy.²⁵ GDM can lead to high amniotic fluid levels, high infant weight which can lead to delivery complications, disturbed placenta development, and increased risk of not only Type 2 diabetes in mother and child but also increased risk of cardiovascular disease for both mother and child.²⁶

It is estimated that 2-6% of pregnancies in Europe result in gestational diabetes. Prevalence may be higher in Southern Mediterranean countries and lower in Northern EU countries.²⁷ The exact number of women with GDM is unknown. However, studies show that the prevalence of GDM is increasing.²⁸

Many General Practitioners lack both awareness and clinical guidance for dealing with gestational diabetes. Throughout the EU, screening and policy varies due to a lack of consensus on testing, diagnostic procedures, and screening efforts.²⁹



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STEPS FOR POLICY ACTION

- 1) **Improve existing EU data collection on diabetes.** Currently data collection at the EU level only examines death rates from diabetes. Data should also be collected on the incidence and prevalence of diabetes, disaggregating by gender and age in order to fully understand diabetes trends.
- 2) **Examine the interaction between diabetes, gender, age, and other chronic diseases.** As individuals live longer and the prevalence of chronic diseases increase, it is important to understand the role that gender, age, and other conditions contribute to the development of diabetes trends. This would lead to better prevention and management of diabetes.
- 3) **Explore the impact of diabetes in women on other diseases affecting women.** Diabetes in women has been linked to an increased risk of diseases such as CHD, breast cancer, etc. The connection between diabetes and other diseases needs to be examined in more depth to better understand how diabetes impacts women's health across the lifespan.
- 4) **Increase awareness of the connection between pregnancy and diabetes and improve detection and treatment of GDM.** Gestational diabetes mellitus (GDM) increases the risk of Type 2 diabetes to both mother and child. Efforts should be made to increase awareness and prevent the development of GDM. Women with diabetes should be educated on the need to manage their condition during pregnancy. EU-wide screening and diagnostic guidelines need to be developed to improve better detection and treatment.
- 5) **Examine the effect of social determinants on diabetes for both women and men across the lifespan.** Diabetes disproportionately affects lower socio-economic groups and older populations. In order to tackle health inequalities, it is essential for policymakers and healthcare professionals to understand the interplay between social, ageing and gender determinants to improve diabetes prevention and management across the lifespan.
- 6) **Tackle Europe's obesity crisis, by making women as family caregivers more health-literate about the role of diet and exercise in preventing diabetes.**

