

*Before, Between & Beyond Pregnancy*  
**The National Preconception Curriculum and Resources Guide  
for Clinicians**

**Annotated Articles Guiding Preconception Care  
of Women with Diabetes**

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**Thyroid Screening**

*Perros, P., McCrimmon, R.J., Shaw, G., Frier, B.M. Frequency of thyroid dysfunction in diabetic patients: value of annual screening. Diabet Med 1995; 12: 622-627.*

**Synopsis:** To assess the prevalence and incidence of thyroid dysfunction in a diabetic outpatient population a random sample of 1310 adult diabetics who received care at the Diabetic Outpatient Clinic of the Royal Infirmary of Edinburgh for >1 year and who had undergone screening for thyroid dysfunction one year earlier were recruited. Blood was drawn for thyroid function testing at recruitment and again after 12 months. The population was largely urban and Caucasian with a median age of 56 (13-95). Both Type 1 (186 males, 220 females) and Type 2 (362 males, 542 females) diabetics were represented.

The prevalence of thyroid dysfunction in the population was 13.4% (176 of the 1310 patients had previous or current disease); prevalence was highest in female type 1 diabetics (31.4%).

A new diagnosis of thyroid disease was made in 89 patients who had normal testing 12 months earlier making the annual incidence 6.8%. Again, female Type 1 diabetics had the highest (12.3%) incidence of new onset disease. Overall peak incidence was in the 6<sup>th</sup> decade with a female:male ratio of 2.3:1. However, the female type 1 patients had an additional peak incidence in their 30s.

Information on thyroid autoantibodies was available in 63.6% of the cases of thyroid disease. Significant titers (>1:200) were present in 80% of the primary hypothyroid, 44.4 % of the hyperthyroid, and 90.9% of those with subclinical hypothyroidism. None of the patients presented with symptoms indicative of thyroid disorder, thus if not screened they would not have been diagnosed. The authors noted that patients with subclinical hypothyroidism and positive autoantibody titers progress to overt hypothyroidism at a rate of 5% per year

In the general population, the annual incidence of thyroid dysfunction is 0.5% in females; however, this study of diabetic patients revealed an incidence (including subclinical forms) of 1.45%/year overall and 3.8%/year in females with Type 1 diabetes. The authors conclude that in this population which has a 5-6 times higher incidence, annual screening can be recommended.

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