

Genomics To Health – December 2012

Family History & Diabetes: Practical Genomics



Diabetes is a group of complex diseases with polygenic (a combination of many genes [genomic]) causation. Diabetes is an interaction of what you inherit ([genetic predisposition to the disease](#)) and [environmental and behavioral factors](#).

Diabetes	Family History	Other Risk Factors
Type 1	Contributing factor (See ADA Genetics website)	Autoimmune and environmental
Type 2	Stronger link to family history than Type 1. If one parent diagnosed <50 years of age, lifetime chance of developing diabetes is 1:7. If parent is >50 at diagnosis, the lifetime chance is 1:13. If both parents have diabetes, lifetime chance is 1:2.	Race: African American, Latino, Native American, Asian American, Pacific Islander at greatest risk. Other: poor dietary habits, sedentary lifestyle, obesity
Gestational Diabetes	First degree relative with Type 2 diabetes increases risk. Risk dependent upon age of patient at time of diagnosis. If patient >30 years of age and has a family history of diabetes, the risk for gestational diabetes is 3x population risk.	
Diabetic Complications	Diabetic complications appear to cluster in families, e.g. nephropathy and retinopathy .	

Family history assessment is a [core competency for all nurses](#). A targeted **diabetic** family history assessment:

- Information from the maternal and paternal side of the family
- Health information from 3 generations, e.g. patient's offspring, mother, father, grandmother, grandfather, etc.
- History of Type 1, 2, or gestational diabetes
- Age of diagnosis
- Family history of diabetic complications, e.g. nephropathy, retinopathy
- Ethnicity or racial group
- Shared family patterns, e.g. eating, exercise

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*** For additional information contact the THD Diabetes Education Program: 214-345-4330