Solutions
Medical Underwriting at Work for You

LIFE AND DISABILITY INSURANCE

MetLife

Impaired Glucose Metabolism (Pre-Diabetes)

Ratings can be sweet or not so sweet

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Sarah, 47, an attorney, has applied for life and disability insurance. Six years ago she was very overweight and her blood pressure and cholesterol were high. She was told she had "pre-diabetes," with a fasting blood sugar of 119 and Hemoglobin A1C of 6.2%. Her doctor advised changes to avoid becoming diabetic, so she joined a gym, changed her diet, and took medications for her blood pressure and cholesterol. Her blood sugar, weight, cholesterol, and blood pressure now have been normal for five years.

Richard, 38, is a salesman who has not followed his doctor's advice about diet and exercise, nor does he take his antihypertensive and cholesterol lowering medications faithfully. Fasting blood sugar on his recent exam was 108, and A1C was 5.9, with similar measurements going back five years.

Hypothetical Underwriting Outcomes

Sarah qualifies for preferred life insurance rates and standard disability rates, because she has been healthy for several years. On the other hand, Richard's life insurance rating is +50, and he will pay 30 percent extra premium for disability coverage.

Impaired glucose metabolism affects underwriting mainly because of the serious mortality and morbidity implications of diabetes. The risk for coronary artery disease and stroke in diabetics, for example, is 2-3 times that of healthy individuals. Diabetics also are at greatly increased risk for kidney failure, nerve damage and blindness. Even before developing diabetes, persons with impaired glucose metabolism have an increased risk of these dreaded complications.

What is Impaired Glucose Metabolism

Nearly 80 million Americans have impaired glucose metabolism, or "pre-diabetes." Impaired glucose metabolism happens when the body produces less insulin than normal and/or our cells become resistant to the effect of insulin on the cell walls — rather like what happens when a lock becomes rusty and harder to open with a key. Obesity increases insulin resistance. When impaired glucose metabolism occurs in conjunction with obesity, hypertension, and hyperlipidemia, it sometimes is called the metabolic syndrome.

Glucose serves as the primary energy source for every cell in the human body and is critical for our muscles, intestines, heart, lungs, nerves, brain, kidneys and all other organs. This "simple sugar" results when we digest certain complex carbohydrates – mainly food like bread, pasta, potatoes and pastries. Glucose is absorbed from the gut into the blood before it can move into cells. The hormone insulin is essential to "unlock the doors" in the cell walls so the glucose can enter.

The level of glucose in our blood primarily reflects our cells' capacity to absorb it: an elevated blood sugar means our cells are not taking the glucose in very well, so more of it stays in the circulatory system. The glucose in our blood does no good until it enters our cells. In fact, it appears to harm our arteries, increasing the risk of heart attack, stroke and other

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Questions to ask your clients who have a history of Impaired Glucose Metabolism

- How recently has your fasting blood sugar, A1C, and/or fructosamine been abnormal?
- Do you smoke or have you been a smoker?
- Do you have hypertension or hyperlipidemia?
- Do you have any family members with diabetes?
- Are you taking any medications?

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complications.

There are two main types of impaired glucose metabolism. Some individuals have one or the other; many have both:

- Impaired fasting glucose (IFG) is defined as blood sugar of 100 to 125 mg/dl after an overnight fast, with normal values being below that range and diabetes above it.
- Impaired glucose tolerance (IGT) is defined as blood sugar ranging from 140 to 199 mg/dl two hours after ingesting a glucose load (75 gm) during an oral glucose tolerance test. A healthy person's level is below that range, while a diabetic's level is above it.

Measurements of glucose levels are important because of the key role that molecule plays both in health and disease. A commonly used test is HemoglobinA1C, which reflects average blood glucose levels over two to three months. Normal values of A1C are below 5.7 percent, with diabetics measuring above 6.4 percent, and impaired glucose metabolic states in between. Another test is fructosamine, which reflects average blood sugar over two to three weeks. The normal range for fructosamine is 1.2 to 2.1 mmol/L.

A person with impaired glucose metabolism has a 25-percent chance over their lifetime of developing diabetes. Risk factor modification can slow or halt that progression. Diet and exercise, as well as treatment of hypertension and hyperlipidemia (elevated cholesterol and/or triglycerides), are strongly advised in such cases. Certain medications such as metformin (Glucophage) can also make our cells better able to let insulin do its job.

The cases presented are hypothetical. Actual underwriting decisions will be based on a review of the complete medical history.

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