



## Rx FOR SUCCESS

## Diabetes Mellitus

Diabetes Mellitus (DM) is characterized by abnormal sugar metabolism causing hyperglycemia (high blood sugar). Chronic hyperglycemia adversely affects the body. In the vascular system, there can be events such as strokes and heart attacks caused by atherosclerosis. There can also be renal disease, peripheral neuropathy, and blindness. In the United States, DM is a leading cause of end stage kidney disease, leg amputations, and blindness.

Blood sugar enters cells via the action of insulin, which is a hormone produced by the beta cells of the pancreas. Factors that contribute to hyperglycemia include reduced insulin secretion, decreased blood sugar (glucose) usage by the body, or increased glucose production.

**Type 1 diabetes**, formerly called juvenile-onset or insulin dependent (IDDM), has a peak age at onset of 12 years old. It is unusual to begin after age 40. Type 1 DM is due to beta cell destruction so that no insulin is produced and must be replaced by insulin injections. Symptoms include excessive thirst, excessive urination, and weight loss. Rating for diabetes mellitus depends on 1) age at onset, 2) years since diagnosis, 3) control of the diabetes, and 4) presence of complications. Ratings increase with younger ages, longer times since onset, poor control and complications.

**TABLE FOR DIABETES MELLITUS - TYPE 1 (BASED ON AGE AND DURATION)\***

Age at issue	0 – 7 years	8 – 14 years	15 – 20 years	Over 20 years
0 – 17	Decline	Decline	Decline	—
18 – 34	Table E	Table E	Table F	Table G
35 – 49	Table D	Table D	Table E	Table F
50 – 65	Table C	Table D	Table D	Table E
66 +	Table B	Table C	Table D	Table D

**Type 2 diabetes**, was formerly called adult-onset or noninsulin dependent (NIDDM). It is characterized by 1) variable degrees of resistance to the action of insulin, 2) impaired insulin secretion by the beta cells, or 3) impaired glucose production. Type 2 DM usually develops over the age of 30, but its incidence is increasing in children and adolescents especially those who are obese. (Eighty percent of Type 2 patients are obese. Many have excessive thirst or urination, but most have no symptoms. Type 2 may also require insulin in the later stages). Type 2 is initially treated with diet and exercise. If decreased calorie intake and increased exercise does not result in blood glucose control, oral medication is added. Some oral medications include sulfonylureas, alpha-glucosidase inhibitors, thiazolidinedione, metformin, and repaglinide. Risk factors for the development of NIDDM are older age, obesity, positive family history, and history of gestational diabetes.



**Older age diabetes** or type II diabetes is increasingly common in the older age populations, affecting 18% of people age 64-75 and 40% of people age 80 or older. It is estimated that nearly half of elderly diabetics are currently undiagnosed. Complications from diabetes do not appear to be any less in the elderly. Many older age diabetics already show signs of complications (example, retinopathy-eye changes) at the time of diagnosis because they had the disease for a number of years prior to the actual diagnosis. Treatment for diabetes in the elderly includes diet, exercise, oral medication, and insulin. As many as 40% of older age diabetics are obese and are instructed to follow a diet and an exercise weight loss program. For those who fail diet therapy, oral medication is started. Insulin is reserved only for those diabetics whose blood sugars cannot be controlled by oral medication and diet.

**TABLE FOR DIABETES MELLITUS - TYPE 2 (BASED ON AGE AND DURATION)\***

Age at issue	0 – 7 years	8 – 14 years	15 – 20 years	Over 20 years
18 – 34	Table D	Table D	Table E	Table E
35 – 49	Table B	Table C	Table D	Table D
50 – 65	Table B	Table B	Table C	Table C
66 +	Non smoker Plus	Table A	Table B	Table B

\*Age based credits (50 – 100%) are given for excellent control ( $HbA_{1c} \leq 7\%$ ). Debits are added for major complications such as proteinuria, retinopathy, or neuropathy.

**Secondary diabetes** can result from pancreatic disease, hormonal syndromes (Cushing's syndrome), drug-induced disease (thiazide diuretics, steroids, phenytoin) or those associated with syndromes such as hemochromatosis and acromegaly.

**Impaired glucose tolerance** (IGT) and **impaired fasting glucose** (IFG) are also termed subclinical or borderline diabetes. Patients generally have no symptoms. Many go on to develop diabetes. There is also an increased risk of cardiovascular disease.

**Gestational diabetes** is diagnosed when glucose intolerance is discovered during a pregnancy. It is associated with increased perinatal complications. Risk factors for the development of gestational diabetes are older age, overweight, previous large or stillborn babies, or positive family history of diabetes. Women with a history of gestational diabetes have an increased risk of developing Type 2 diabetes (as high as 50% within 10 years and 70% within 20 years).

**Diabetes Control** is important because Diabetes is a progressive disease that can be slowed by meticulous control of blood sugar, weight control, and exercise. Diabetes control is monitored by testing glycosylated hemoglobin in the blood and by home monitoring of blood sugar. Normal glycosylated hemoglobin is a value of <6 (though range of normal varies among testing laboratories). The goal for known diabetes is  $\leq 7$ . Glycosylated hemoglobin over 8 is evidence of poor control.

### DIAGNOSTIC CRITERIA FOR DIABETES

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- ▶ Fasting blood glucose: 2 readings  $\geq 126$  mg/dl
- ▶ 75 gram oral glucose tolerance test: Diabetes: 2-hour sample  $> 200$  mg/dl Impaired glucose tolerance: 2-hour sample between 140–200 mg/dl
- ▶ A positive 100 gram glucose tolerance test for pregnant women to screen for gestational diabetes

Other laboratory studies used to monitor diabetes include glycosylated hemoglobin (HbA1c) and fructosamine. HbA1c gives an indication of glucose control over the preceding 60 days, and fructosamine (glycosylated protein) measures glucose control over a 20-day span.

*To get an idea of how a client with a history of Diabetes Mellitus would be viewed in the underwriting process, use the Ask “Rx”pert Underwriter on the next page for an informal quote.*

**Ask “Rx”pert Underwriter (Ask Our Expert)**

After reading the *Rx for Success* on Diabetes Mellitus, use this form to Ask “Rx”pert Underwriter for an informal quote. The rating for DM depends on the age of onset, the duration, treatment, control of the blood sugar, and complications if any.

Producer \_\_\_\_\_ Phone \_\_\_\_\_ Fax \_\_\_\_\_  
 Client \_\_\_\_\_ Age/DOB \_\_\_\_\_ Sex \_\_\_\_\_

If your client has had Diabetes Mellitus, please answer the following:

**1. Please list date of first diagnosis.**

\_\_\_\_\_

**2. How often does your client visit their physician (Also note date of last visit.)?**

\_\_\_\_\_

**3. The client’s diabetes is controlled by:**

- Diet alone  Insulin (Medication and dose.) \_\_\_\_\_  
 Oral medication \_\_\_\_\_  Other (Medication and dose.) \_\_\_\_\_

**4. Is your client on any medications?**

- Yes. Please give details. \_\_\_\_\_  
 No

**5. Please give the most recent blood sugar and hemoglobin A1c readings.**

\_\_\_\_\_

**6. Please check if your client has had any of the following:**

- |   |   |                                       |
|---|---|---------------------------------------|
| <input type="checkbox"/> Chest pain or coronary disease | <input type="checkbox"/> Black out spells | <input type="checkbox"/> Neuropathy   |
| <input type="checkbox"/> Abnormal lipids                | <input type="checkbox"/> Hypertension     | <input type="checkbox"/> Retinopathy  |
| <input type="checkbox"/> Kidney disease                 | <input type="checkbox"/> Protein in urine | <input type="checkbox"/> Abnormal ECG |

**7. Has your client smoked cigarettes in the last 12 months?**

- Yes  
 No

**8. Does your client have any other major health problems (e.g., cancer, etc.)?**

- Yes. Please give details. \_\_\_\_\_  
 No

**9. Please tell us your client’s height and weight.**

Height \_\_\_\_\_ Weight \_\_\_\_\_