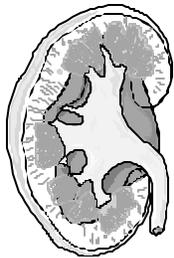


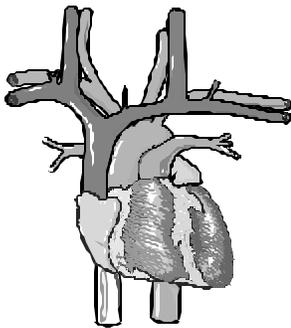
## Diabetes Mellitus - Part II

Our last publication of *Rx for Success* discussed the types of diabetes, diagnostic criteria and general underwriting approach. This issue will look at the long-term complications of diabetes mellitus. All types of diabetes of sufficient duration can develop long-term complications of **nephropathy** (*kidney disease*), increased **atherosclerosis** (*cardiovascular disease*), **neuropathy** (*nervous system disease*), and **retinopathy** (*eye disease*). Poorly controlled diabetics will have a greater number and more rapid development of complications. Thus, the degree of complications gives some indication of long-term diabetic control.



Kidney Diagram

**Nephropathy:** This is the diabetic complication associated with the highest mortality. Diabetic kidney disease develops only in 35-45% of patients with Type 1 (*insulin-dependent diabetes mellitus*) (IDDM) and less than 20% of patients with Type 2 (*non-insulin-dependent diabetes mellitus*). In the U.S., diabetes is the leading cause of end stage renal disease requiring dialysis or transplant. Nephropathy starts with the development of microalbuminuria which is a small amount of albumin (*type of protein*) in the urine detected by the microalbumin test (*normal range 0-3 mg/dL*). This may occur as early as 5 years from the onset of diabetes. It usually takes another 5-10 years for overt proteinuria to develop (*noted by a positive random routine urinalysis or greater than 300 mg of albumin on a 24-hour urine collection*). The average time from overt proteinuria to needing dialysis is only 5-6 years. The risk of cardiovascular disease is much greater in a diabetic with renal disease vs. no renal disease. Hypertension accelerates the kidney disease. The presence of persistent protein in the urine of a known diabetic would have additional rating and may call for a decline on an individual basis. Survivorship policies would be highly rated.



Heart Exterior Diagram

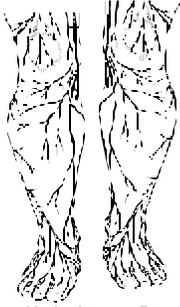
**Cardiovascular:** Atherosclerosis is implicated in 80% of all diabetic mortality. Coronary artery disease develops at a younger age in diabetics (*especially if they also have renal disease*). Also, the usual protective effect of female gender is lost. Diabetics more often have atypical angina and the mortality rate is higher following myocardial infarction than in non-diabetics. The total rating for coronary artery disease in a diabetic will range from high substandard to a decline on an individual basis.

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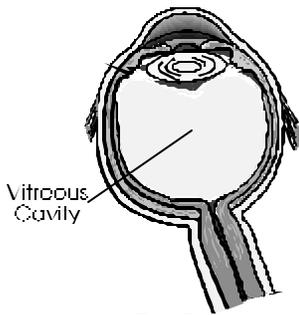
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# Rx FOR SUCCESS



Lower Limb Nerves Diagram

**Neuropathy:** The most common form of neuropathy in diabetes is a peripheral neuropathy (*stocking-glove distribution: loss of sensation in hands and feet*). Electromyography (EMG) studies show some degree of abnormality in most patients within 5-10 years from the onset of diabetes. Loss of sensation in the feet can lead to foot trauma and diabetic ulcers. Diabetes is the leading cause of lower extremity amputation in the U.S. The presence of neuropathy will lead to a mildly increased diabetic rating.



Vitreous Cavity

Inner Eye Diagram

**Retinopathy:** Changes include microaneurysms, hemorrhages, and exudates (*fluid collection*). Neovascularization and proliferative retinopathy refers to the development of new blood vessels in an ischemic area which can grow out into the vitreous cavity. These new vessels are fragile and often bleed. Late changes also include scarring and retinal detachment. After 7 years, half of all patients with insulin-dependent diabetes mellitus have some degree of retinopathy—by 15 years it reaches 95%. Diabetic retinopathy will lead to a mildly increased diabetic rating.

The presence of any diabetic complication will lead to an increased rating above the basic diabetic rate (*see chart below from the previous Rx for Success*). The most serious complications are the kidney disease and presence of atherosclerosis.

## Basic Rating Guidelines for Diabetes Mellitus

Age at Issue	Time Since Diagnosis			
	1 month–7 years	8–14 years	15–20 years	Over 20 years
20-29	F	F	G	H
30-39	E	E	F	G
40-49	D	D	E	F
50-65	C	D	D	E
66 and over	B	C	D	D

The rating for diabetes mellitus depends upon the age at onset and the duration of the disease. The degree of diabetic control and any diabetic complications will heavily influence the rating. Good control and not requiring insulin will reduce the rating. A best case scenario with diagnosis over age 60, normal weight, good control by diet treatment only, and no complications can be considered without a rating. Diabetics are not considered until age 20.

To get an idea of how a client with a history of diabetes would be viewed in the underwriting process, please feel free to use the attached *Ask "Rx" pert underwriter* for an informal quote.

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**Diabetes - Ask "Rx" pert underwriter**  
***(ask our experts)***

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

If your client has diabetes, please answer the following:

- ① Please list date when first diagnosed: \_\_\_\_\_
- 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
  - oral medication \_\_\_\_\_ *(medication & doses)*
  - insulin \_\_\_\_\_ *(amount of units/day)*
- ④ Is your client on any other medications?
  - yes, please give details \_\_\_\_\_
  - no
- ⑤ Please give the most recent blood sugar reading \_\_\_\_\_
- ⑥ Does your client monitor their own blood sugar? \_\_\_\_\_
- ⑦ If available, please give the most recent glycohemoglobin (HbA1c) or fructosamine level \_\_\_\_\_
- ⑧ Please check if your client has had any of the following:

<input type="checkbox"/> chest pain or coronary artery disease	<input type="checkbox"/> overweight
<input type="checkbox"/> protein in the urine	<input type="checkbox"/> elevated lipids
<input type="checkbox"/> neuropathy	<input type="checkbox"/> kidney disease
<input type="checkbox"/> retinopathy	<input type="checkbox"/> black out spells
<input type="checkbox"/> abnormal ECG	<input type="checkbox"/> hypertension
- ⑨ Has your client smoked cigarettes in the last 12 months?
  - yes
  - no
- ⑩ Does your client have any other major health problems (ex: cancer, etc.)?
  - yes, please give details \_\_\_\_\_
  - no

After reading the *Rx for Success* on Diabetes, please feel free to use this *Ask "Rx" pert underwriter* for an informal quote.

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