

IMPAIRED RISK REFERENCES

Issue 26

Underwriting the Diabetic with CAD

THE CASE

STUDY FOR

THIS MONTH

Case Study: A 58 year-old man is looking for \$500,000 of term life insurance. He has a two-year history of diabetes with good control (HbA1c of 7.0). However three years ago he had a coronary angioplasty; he is presently taking aspirin and statins. There is now a normal EKG and a negative stress test.

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Meet Dale Hobbs, the newest member of the impaired risk team. Dale has over 18 years of experience in brokerage and substandard brokerage underwriting. Give him the opportunity to evaluate your next impaired risk case.

Diabetes and coronary artery disease (CAD) are a commonly encountered combination during underwriting. Diabetes is the single worst CAD risk factor, being twice as bad as any other risk factor. Diabetes increases the CAD risk an average of four times over the non-diabetic. The pre-diabetic condition, as likely existed in the case study, doubled the risk of developing CAD.

Correlation of Blood Sugars to HbA1c	
HbA1c	Average Glucose
6	120
7	150
8	180
9	210
10	240
11	270
12	300

High blood sugar caused by diabetes is harmful to the arteries. The higher the average blood sugar levels, the more harmful the effects. To determine the blood sugar levels, a hemoglobin A1c (HbA1c) test is given to measure the average blood sugar (glucose) over a six to eight week period. A normal level is 6.0 or less and correlates with an average blood sugar of 120 or less. (See illustration.) A level of 7.0, as in the case study, is reasonably good control and correlates with an average blood sugar of 150. Usually an HbA1c over 9.0 is unacceptable with CAD. For an overview of underwriting diabetes when it occurs by itself, refer to Issue 3 of *Impaired Risk References*.

The way diabetes (and pre-diabetes) causes coronary artery disease is complex. It raises the LDL (bad cholesterol), lowers the HDL (good cholesterol), and raises the triglycerides. Diabetes also causes damaging effects to the internal lining of the artery and inflammation to the artery wall. The internal lining of the artery (called endothelium) serves as a protective layer and the artery wall is critical in leading to the process of hardening and narrowing of the artery.

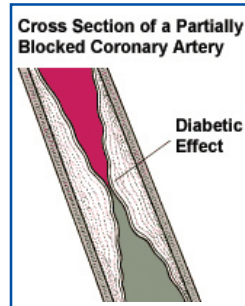
When diabetes exists by itself, the policy may be rated due to the chance that a heart attack or

stroke will ultimately occur and lead to premature death. However, when CAD has already developed, the artery is vulnerable to even further disease.

Diabetes has a greater effect on the artery in this case and more risk to mortality exists. There are however, measures that can improve the mortality risk and thus the underwriting:

- Better diabetic control.
- Diabetic medications, which seems to improve protection of the artery.
- Medications such as aspirin, statins (like Lipitor) and ACE inhibitors (like Vasotec), which slow the progression of the diseased coronary arteries.
- Weight reduction in the overweight person.
- A regular exercise program.

Cases where diabetes and CAD coexist become even more difficult to underwrite when additional coronary heart disease risk factors are present such as high blood pressure (over 135/85) and smoking. Hypertension control is much



more strict and BP levels more important in this circumstance. These cases often have to be declined.

In this case study, the most likely assessment would be Table 4 (on a standard plus base). The combination of dia-

betes and CAD usually starts at Table 6 at best. However, the use of aspirin and statins help the risk. The negative stress test in this case also indicates the disease progression has been controlled.



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