

## ADEQUATE DIABETES CONTROL

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The best measure of control is the Hemoglobin (HGB) A1/C test. This measures blood cells for the sugars taken up in the last 90 days or so. Generally, the level of control is:

Good Control: **HGB A1/C: 6.0% - 6.9%**

Poor Control: **HGB A1/C: 7.0% - 8.0%**

Out of Control: **HGB A1/C > 8.0%**

## DIABETES & THE HRP

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Uncontrolled diabetics must be removed from the HRP as required by 10 CFR 712.

At Pantex, each diabetic person is evaluated individually after considering all known factors. Pantex clinicians base their recommendation to the HRP Management Official on the blood-work results, other relevant physical findings, and the person's job duties.

Individuals removed from the HRP for their uncontrolled diabetes are encouraged to work with their personal physician to get back inside the HRP guidelines. These people are encouraged to keep Pantex clinicians informed of their progress.

### REFERENCES

- o 10 CFR 712, "Human Reliability Program"
- o WI 02.01.01.02.03, "Deny/Reinstate Human Reliability Program Access"
- o American Diabetes Association:  
<http://www.diabetes.org/home.jsp>
- o Mayo Clinic Diabetes Information:  
<http://www.mayoclinic.com/health/type-2-diabetes/DS00585>

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- 002 – Understanding Your Blood Chemistry
- 003 – Your Complete Blood Count & Differential
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- 008 – High Blood Pressure (Hypertension)

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## PANTEX OCCUPATIONAL MEDICINE

*Healthcare Assessment, Wellness Programs  
& Case Management*

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## Diabetic Control

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## WHAT IS DIABETES?

Laboratory values are evaluated as part of a person's complete health status. Many people normally have some values outside of the statistical range specified as "normal." This does not necessarily indicate the presence of disease or other problem.

Diabetes is short for "diabetes mellitus," a group of diseases characterized by the inability of the body to use sugar properly. For most diabetics, these diseases are inherited. Other, rare, causes include: inflammation of the pancreas (pancreatitis), pancreatic toxins, and extreme obesity.

The more parents, grandparents, or children in the family who have diabetes, the greater the chances are that you will eventually have diabetes. There are several forms of diabetes.

## INSULIN-DEPENDENT DIABETES (IDDM)

This most severe form of diabetes is also called "Type I Diabetes" or "Juvenile Onset Diabetes."

Management by insulin injection is always required.

## NON-INSULIN-DEPENDENT DIABETES (NIDDM)

This form of the disease may be less severe than insulin-dependent diabetes and is also known as "Type II" or "Adult Onset".

Type II diabetes may be adequately controlled by a combination of diet, exercise and weight control.

When those don't work, there are oral medications (pills) that may work. If the pills don't work either, then control by insulin injection is required.

## GESTATIONAL CARBOHYDRATE INTOLERANCE (GCI)

This diagnosis is used when diabetes is first recognized when a woman is pregnant. Adequate control is very important. Uncontrolled gestational diabetes (GCI) can endanger the life of the mother and can also damage the unborn child.

## WHAT IS A BRITTLE DIABETIC?

Someone who requires insulin to control his/her diabetes – whatever form the disease takes – is called an "insulin-dependent diabetic".

In some cases, the disease can be difficult to control even using all available means. Very small changes in the daily routine can cause loss of diabetes control, in spite of taking insulin.

A person with these complications is called a "brittle" diabetic.

## CAN DIABETES BE PREVENTED?

**No, not usually.**

When someone inherits the genes for diabetes from their parents, that person is going to develop diabetes.

Inherited diabetes cannot be prevented but the start of the disease can be delayed by:

- o Eating a low-sugar diet
- o Weight control
- o Increasing aerobic exercise.

In some, non-inherited, cases of acute Pancreatitis, toxic exposures or morbid obesity, it might be possible to prevent diabetes.

## CAN DIABETES BE CURED?

**No, not usually.**

Inherited diabetes is a lifelong condition. With constant attention, some complications can be delayed or prevented by careful blood-sugar control.

Research is being conducted on beta-cell transplants, which might someday offer a cure.

For now, there are five basic strategies to controlling diabetes and minimizing its negative effects:

**Diet Control** – a permanent change in diet is always required.

**Weight Control** – keep your weight at the recommended level.

**Regular Exercise** – Exercise improves the general well being of a diabetic (and everyone else!).

**Oral Medications** – For Type II diabetics, oral medication may be helpful. There are several new drugs that are very effective in treating people with this form of the disease.

**Insulin Injections** – This is the only treatment for Type I diabetics and may also be required to control Type II diabetes, if other means failed.

## DIABETIC EMERGENCIES

Individuals with diabetes are subject to three different emergency medical conditions:

**Inadequate Control** – can lead to high blood sugar (glucose > 300 mg./dl.) Also called "hyperglycemia," this may cause brain swelling. A swollen brain does not function normally. The person's judgment and reflexes are impaired.

**Ketoacidosis** – When the body can't use glucose, it begins to burn protein. This may result in diabetic ketoacidosis (DKA), a medical emergency that can lead to loss of consciousness.

**Hypoglycemia** – In some cases, control is too severe and the person's blood sugar goes too low. Low blood sugar can cause rapid heart rate, sweating, low blood pressure, seizures and loss of consciousness. Death can result in extreme cases.