

Family Medicine Clerkship Plain Language Summary

Nicholas Marston

Title: Are lifestyle changes or drugs more effective in preventing diabetes?

Name: Nicholas Marston, MS4

Plain Language Summary:

What is diabetes?

Diabetes is high blood sugar. It can be caused by a problem making or recognizing insulin. Insulin is a hormone released in the blood after meals. It helps cells use the sugar from food for energy. Type II diabetes is the most common form of diabetes. It is caused by cells that can't recognize insulin. This makes it harder to get sugar into the cells for energy. This results in more sugar staying in the blood causing diabetes.

Is diabetes dangerous?

It can be. Having high blood sugar can cause damage to organs over time. It can build up in your nerves causing changes in vision and sensation. High blood sugar can also cause damage to blood vessels causing kidney and heart disease. This is why seeing a doctor regularly and keeping your diabetes under control is so important.



What is prediabetes?

It is a high-risk group. These patients have higher than normal blood sugars but not high enough to be diagnosed with diabetes. They are at an increased risk of getting diabetes in the future.

How do I know if I have prediabetes?

It is a simple blood test. Doctors can do the test while fasting or two hours after a sugar load. There is also a test that can be done at any time called an A1c. It shows how well your sugars have been controlled for the last 3 months.

How often does prediabetes lead to diabetes?

This is very common. 11% will progress to diabetes each year. 50% will develop it in 5 years. Many of the rest will get diabetes by 10 years. Preventing diabetes is ideal but delaying its onset is valuable as well. It keeps your organs healthy longer.

How often should I be tested for diabetes?

Patients with normal blood sugars should be screened for diabetes every three years. Patients with prediabetes are at higher risk and should be checked every 1-2 years.

How can I prevent diabetes?

It is important to take action sooner rather than later. This is usually done with lifestyle changes. Regular exercise and weight loss is the best way to prevent diabetes. 150 minutes of exercise a week and 7% weight loss is ideal. This can reduce the risk in pre-diabetics by 58%.

Medication can also be used. Metformin is a drug that has been shown to lower the risk of developing diabetes in pre-diabetics. It is not as good as lifestyle changes but it is better than nothing at all. It reduces the progression to diabetes by 31%.

Additional Resources:

1) *Prediabetes* - American Diabetes Association

<http://www.diabetes.org/diabetes-basics/prevention/pre-diabetes/>

2) *Prediabetes* - MayoClinic.com

www.mayoclinic.com/health/prediabetes/DS00624

Key Words:

Pre-diabetes, blood sugar, prevention, lifestyle changes, metformin

This document was created by a medical student enrolled in the Primary Care Clerkship at the University of Minnesota Medical School as part of the course project. The aim of the project is to present information on a medical topic in the format of a patient education handout. It does not necessarily reflect the views of the University of Minnesota Medical School physicians and faculty. These materials are provided for informational purposes only and are in no way intended to take the place of the advice and recommendations of your personal health care provider. The information provided may no longer be up to date since it has not been reviewed since the date of creation. The information provided should not be used to diagnose a health problem or disease, or as a means of determining treatment. In the event of a medical emergency, immediately contact a doctor or call 911.