SCRIPT:

Insulin Resistance

Today, we'll talk about a serious and increasingly common disorder in our body's functioning called insulin resistance. This lesson is crucial because the simplest way to avoid these health problems is, of course, a healthy lifestyle. If your body mass is currently within the normal range, you might think that conditions like diabetes or insulin resistance, which is often a precursor to diabetes, don't concern you at all. However, problems with managing sugars in our body often don't show any symptoms at the very beginning - and just because we're not obese doesn't mean we're completely healthy.

Currently, there are hundreds of millions of people worldwide with diabetes, and many of these individuals are not yet aware of their condition because it doesn't show symptoms for a while. Many of them may struggle with insulin resistance, which, if neglected, will ultimately lead to diabetes for them. Often, we only learn about diabetes when it has already caused irreversible damage to our bodies. That's why it's often referred to as the "silent killer." Insulin resistance, on the other hand, is often a precursor to type 2 diabetes.

Take a moment to think - can you say anything about insulin resistance or type 2 diabetes?

Let's start with the basics. What does insulin resistance actually involve? Primarily, it concerns the hormone - insulin, which is responsible, among other things, for maintaining the proper level of sugar in the blood. Look at the infographic.

On the left side, we see the situation when everything works as it should. Here we have a human body cell, which needs glucose - simple sugar - to live. To allow glucose into its interior, it needs insulin - which acts as the key "opening the door" to glucose molecules into the cell. The cell produces energy necessary for life from glucose.

Now, look at the right side of the graphic, which illustrates the situation in the case of insulin resistance. Typically, there is a normal level of insulin in the body, but the cells stop responding to its action. As the name suggests, cells become resistant to insulin's action. It's like having the right key because insulin is still active, but at the same time, someone has changed something in the lock, and it no longer responds to turning the key. As a result, glucose cannot reach the inside of the cell, and a high level of sugar remains in the blood.

Additionally, body cells try to "fix" the abnormal condition by producing increasingly larger doses of insulin, forcing them to absorb sugar. Unfortunately, this doesn't work and leads to a range of discomforts.

What can cause insulin resistance?

It's important to be aware that unfortunately, it's increasingly appearing in young people and children, and that's why your knowledge and vigilance on this topic are so important.

The main modifiable causes of insulin resistance, meaning those we have control over, are considered to be:

- poor dietary habits - lots of sugar in the diet, irregular meals, eating a lot of highly processed foods like chips, crisps, hot dogs, pizzas, store-bought sweets, etc.

- insufficient sleep

- strong and frequent stress

- sedentary lifestyle, lack of exercise

- smoking cigarettes

Factors that we do not have control over that increase the risk of insulin resistance include:

- genetics

- gender

- age

As you can see, there are several factors that we have control over. This means that we can prevent insulin resistance from ever affecting us.

What are the symptoms of insulin resistance?

- gaining weight despite a normal diet, without overeating

- hunger attacks about 2 hours after a meal - so-called "wolfish appetite"

- a strong craving for sweets - especially right after a specific meal

- constant headaches

- constant fatigue and excessive sleepiness during the day

- concentration problems and memory difficulties

- sleep problems

- characteristic brown discolorations in the elbow and knee area

- mood swings

In short, the recommended dietary actions are:

- start each day with a nutritious breakfast - which will be a source of complex carbohydrates, protein, and healthy fats. An example of such a breakfast could be scrambled eggs with vegetables (e.g., with zucchini), whole grain bread with cottage cheese, lettuce, and tomato

- minimize the amount of simple sugars. This can easily be done by replacing white rice with brown rice, light pasta with whole grain pasta. When it comes to cooking them, it's best if they are prepared al dente, which means slightly hard

- it's worth avoiding fried foods, especially in deep fat - meaning those that are entirely immersed in oil

- fruits are very valuable, but some contain a lot of simple sugar (banana, grapes), so it's best to combine them in a meal with, for example, yogurt and nuts because eaten separately, they cause significant spikes in blood sugar levels, and as we know, it's not easy for the body to deal with them in insulin resistance

- remove sweets, products sweetened with glucose-fructose syrup, highly processed foods, and fruit juices from your diet. Consider preparing homemade desserts, for example, with the addition of safe sweeteners like xylitol or erythritol

- every day, reach for fresh vegetables and fruits

- fish is welcome, preferably up to 2 times a week

To all this, physical activity is recommended as always. What to choose? Whatever makes you feel better. It doesn't have to be competitive sports. Just start with regular walks. Any movement is better than no movement, and that's a rule worth remembering forever.

And now, as part of the exercise, I invite you to engage in creative work.

Your task will be to present today's knowledge in the form of a poster. Choose one element from the lesson - causes, symptoms, or dietary recommendations for insulin resistance - and create an informative poster on this topic. You can use any techniques - use art supplies or create a graphic poster on the computer. If you feel like it, invite a classmate to create the poster with you. Together, think about where you can hang this poster to educate others about insulin resistance.

Summary and Homework

The lesson on insulin resistance is one of the most important ones. Your knowledge can help you avoid very serious diseases in the future, so use it every day and try to live healthily. To find out if you are at risk of insulin resistance, as homework, complete the assessment test (attachment). Perhaps you will also persuade your family members to take the test!