evropský sociální fond v ČR
EVROPSKÁ UNIE
MINISTERSTVO ŠKOLSTVÍ, MLÁDEŽE A TĚLOVÝCHOVY
OP Vzdělávání pro konkurenceschopnost
Střední škola obchodu, služeb a podnikání a Vyšší odborná škola
Kněžskodvorská 33/A, 370 04 České Budějovice
INVESTICE DO ROZVOJE VZDĚLÁVÁNÍ

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Datum vytvoření: 23. 09. 2013

Číslo DUMu: VY_32_INOVACE_19_AJ_FT

Ročník: 1. – 4. ročník

Vzdělávací oblast: Jazyk a jazyková komunikace

Vzdělávací obor: Anglický jazyk

Tematický okruh: odborná slovní zásoba a témata pro studenty oboru Aplikovaná chemie

Téma: Blood sugar

Klíčová slova: glucose in blood, hyperglycemia, hypoglycemia, diabetes

Metodický list/anotace:

Materiál slouží k seznámení se základní odbornou slovní zásobou pro studenty oborů Aplikovaná chemie. Jedná se zejména o termíny z oblasti biologie a chemie.

Studenti odhadují na základě svých znalostí význam slov. V případě potřeby pracují se slovníkem. Důležité je pochopení obsahu a aktivní slovní zásoba . Studenti využívají svých znalostí z oboru chemie, biologie a mikrobiologie.

Připraví krátkou prezentaci se zajímavými informacemi.

Blood sugar control

Diabetes

Glucose in our blood

- The concentration of glucose in our blood is important and must be carefully regulated. This is done by the pancreas, which releases hormones that regulate the usage and storage of glucose by cells.
- The blood sugar concentration or blood glucose level is the amount of glucose (sugar) present in the blood of a human or animal. The body naturally tightly regulates blood glucose levels as a part of metabolic homeostasis.
- Glucose is the important source of energy for the cells and blood lipids work as energy store.

Glucose level

- It is important that blood glucose level is kept within a narrow range due to its importance as an energy source for respiration.
- Having eaten a meal containing sugars or starch (eg sweets, potatoes, bread, rice or pasta), the starch and large sugars are digested down into glucose and absorbed across the small intestine wall into the bloodstream. This brings a rise in blood glucose concentration.

- The pancreas monitors and controls the concentration of glucose in our blood. When there is an increase in blood glucose level higher the normal level, the pancreas produces a hormone insulin which is released into the bloodstream.
- Insulin causes glucose to move from the blood into cells, where it is either used for respiration or stored in liver and muscle cells as glycogen. The effect of this is to lower the blood glucose concentration back to normal.

Diabetes

- Blood sugar levels outside the normal range may be an indicator of a medical condition. A persistently high level is referred to as hyperglycemia; low levels are referred to as hypoglycemia. Diabetes mellitus is characterized by persistent hyperglycemia.
- There are two main types of diabetes:

➢ type 1 which usually develops during childhood

➢ type 2 which usually develops in later life

- Type 1 diabetes - is caused when the pancreas does not produce enough insulin. The body is therefore unable to lower blood sugar level when it rises too high.

Controlling glucose level

- People of Type 1 diabetes can help to control their blood glucose level with their diet and by exercising (which can lower blood glucose levels due to increased respiration in the muscles).
- Type 1 diabetics must also inject insulin to control their blood glucose level. A person must conduct a blood test to see blood glucose level (using a blood glucose meter).
- see: http://www.youtube.com/watch?v=kcuUcHU21Ik&feature=player_embedded

Literatura

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