Liver. 2hrs

The main function of the liver is detoxification and metabolism of the macronutrients, alcohol, and vitamins along with minerals. Our unhealthy diet and environmental toxins decrease liver's function. Reactive oxygen species are extremely toxic to normal liver function. If the liver does not work the whole body's metabolism will not work properly.

Free radicals generated by various medical conditions can also harm the liver, therefore surgeons prescribe antioxidants pre-op to patients.

Some of the molecules are protective for liver tissue such as Glutathione, and its circulation is done by Vitamin C which will reduce and regenerate the glutathione. Glutathione is the major antioxidant that reduces free radicals. Cysteine is one of the important for the proper glutathione synthesis. Vitamin E also as an additional reducer, helps glutathione circulation. This system helps the liver to detoxify free radicals.

Conjugation of free radicals is initiated with the Vitamins group of B (B2, B3, B6, B12).

Throughout the lecture, Cytochrome P450 CYP1A2, CYP2A6, CYPTC, and CYP2D6 gene's importance in drug-nutrient metabolism were also provided.

Poor expression of these genes is associated with chronic diseases and even with cancer.

Grapefruit interacts with drug-nutrient absorption. For instance, while taking major medication such as warfarin or antibiotics, grapefruit should be avoided, because it will

Block the action of intestinal CYP3A4, so drugs will be interrupted for absorption, and it's going to stay in the blood for a longer period.

The case study about “ Fibromyalgia” was an example of how to wrap up this topic.

The prevalence of fibromyalgia is 36 mln. Fibro is a muscle fiber, and algia is an ache of it. It is unknown what causes fibromyalgia. The treatment is facilitated by using antidepressants & anti-inflammatory drugs.

Animal fats, trans fats, and hydrogenated fats can exacerbate fibromyalgia symptoms.

So, avoiding these kinds of fats would alleviate the symptoms such as fatigue, weakness, and mood changes.

In this case, taking selenium for better regeneration for glutathione helped the patient, her energy levels were better, and her overall well-being.

Increasing protein also is suggested to increase dopamine levels, which helps to be alert during the day. Monitoring sugar level is also a key.

The lecturer as an RDN states that 98% of her patients have Irritable Bowel Syndrome (IBS). So, treating IBS symptoms is the first clue in the treatment of fibromyalgia. Turmeric and Ginkgo Biloba are great additions to the diet of fibromyalgia patients.

This lecture is beneficial for me because I was diagnosed with fibromyalgia a decade ago. I have learned to manage its symptoms over the years holistically, but this lecture gave me really valuable insights that I can use for myself and my patients.