Metabolism module workbook

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Metabolism Unit Timetable

Session 1	Session 2	Session 3	Session 4	Session 5	Session 6	Session 7	Session 8	Session 9	Session 10	Session 11	Session 12	Session 13
lecture	lecture	lecture	lecture	lecture	lecture		lecture	lecture	lecture	lecture	lecture	
Nutrition and body weight	Cell metabolism	Carbohydrate metabolism 2	Oxidative phosphorylation	protein metabolism	Control of Energy Metabolism	Revision	Introduction to endocrinology & Pancreas	Diabetes mellitus	Thyroid gland	Calcium Metabolism	Adrenal cortex disorders	Revision
lecture	lecture	lecture	lecture	lecture	lecture		lecture	lecture	lecture	lecture	lecture	
homeostasis and circadian rhythm	Carbohydrate metabolism 1	Tricarboxylic cycle & Gluconeogenesis	fuel storage	Lipid transport	Drug metabolism	1st monthly exam	Introduction to endocrinology & Pancreas	Control of appetite	Thyroid gland	Pituitary and Adrenals	Adaptations of metabolism	2nd monthly exam
			Formative exam	Formative exam	Formative exam		Formative exam	Formative exam	Formative exam			
Group work	Group work	Group work	Group work	Group work	Group work		Group work	Group work	Group work	Group work	Group work	

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Aim

The aim of metabolism module is lecturing students on how to acknowledge and understand the vital activities inside the human body on a molecular level, as well as chemical examinations used in the diagnosis of some diseases.
Therefore, the aim of this unit is to provide a structure for students to consider patients with certain clinical problem. Signs and symptoms presented in these clinical problems to help in diagnosis. We have chosen a limited number of clinical problems with certain metabolic disturbances.

The 'metabolic pathways are used in different contexts, so that your knowledge of how to apply this module will grow as the semester progresses.

Understanding the biochemical pathway is an important first step in the metabolism module. This will also allow for a progressive accumulation of knowledge of how the body manage these biochemical pathways in responding to environmental and genetic factors.

Learning During the metabolism module.

The lecturers who are running the module are specialists, pharmacists and biochemists all involved in looking after patients on a daily basis.
The lectures are delivered by using PowerPoint format using demonstration tools such as illustrative charts. Moreover, there are interactive engagements of the students during the lecture.as well as during the small group session where the clinical problems are discussed between them.
The evaluation methods were done by formative and summative exams. These exams includes quizzes, direct questions, case scenarios which contains 5 short assay in each case.

Summary of Intended Learning Outcomes.

On completion of this module, students should be able to:

1. Describe the principles of the metabolism module.
2. Describe the metabolic pathways and the related problems.
3. Describe a clinical approach to gathering information in order to evaluate patients with certain metabolic disease and to use the principles of metabolic pathway in diagnosis.
4. Describe the use of laboratory investigations to aid in the diagnosis.
5. Describe the principles of management in response to general measures of support and specific treatment.

References.

1. Marks Essentials of Medical Biochemistry.
2. Ganong's Review of Medical Physiology.
3. Medical Biochemistry, Baynes and Dominiczak

4. Medical Physiology Walter F. Boron and Emile L. Boulpaep