



**Karolinska  
Institutet**

Course syllabus for

# **Pediatric Obesity - Causes, Consequences, and Management, 7.5 credits**

Barnobesitas - orsaker, konsekvenser och åtgärder, 7.5 hp

This course syllabus is valid from autumn 2023.

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|----------------------------|---|
| Course code                | 2QA340  |
| Course name                | Pediatric Obesity - Causes, Consequences, and Management          |
| Credits                    | 7.5 credits   |
| Form of Education          | Higher Education, study regulation 2007                           |
| Main field of study        | Not applicable  |
| Level                      | Second cycle, has only first-cycle course/s as entry requirements |
| Grading scale              | Pass, Fail  |
| Department                 | Department of Clinical Science, Intervention and Technology       |
| Decided by                 | Education committee CLINTEC                                       |
| Decision date              | 2022-12-07  |
| Course syllabus valid from | Autumn 2023   |

## **Specific entry requirements**

A Bachelor's degree or a professional degree worth at least 120 credits in healthcare. And proficiency in Swedish and English equivalent to Swedish B/Swedish 3 and English A/English 6.

## **Objectives**

### **Aim**

The aim of the course is to strengthen the professional skills with respect to obesity in childhood and adolescence as well as to stimulate to a reflecting attitude in regard to the evidence within the area.

### **Learning outcomes**

On completion of the course, the student should be able to:

- Demonstrate an understanding of as well as reflect on the development of the obesity and its underlying mechanisms of childhood and adolescence.
- Identify and apply essential terminology (BMI SDS, iso-BMI, etc) that is used when evaluation of growth, degree of obesity and treatment progression in children and adolescents.
- Evaluate the importance of, as well as the preconditions for, physical activity and diet in childhood obesity prevention and treatment.
- Analyse growth in children with obesity of different ages as well as have the ability to identify when immediate medical action is required as a consequence of specific pathology (tumours etc).

- Characterise and contextualise the sequelae and the comorbidity that can affect children and adolescents with obesity.
- Characterise essential parts in, as well as plan for, prevention programme for obesity in different arenas, such as in school and in society settings.
- Evaluate and apply different types of approaches of obesity treatment and identify when these should be used.
- Determine the level care for children and adolescents with obesity in different ages and at different severity.
- Assess and critically review research results about obesity and how it can be applied in society and in clinical situations.

## Content

The course should give a broad base of knowledge within the area of childhood obesity. Where is included:

### *Epidemiology*

In this section, we bring up childhood obesity epidemiology in Sweden and the world as well as the development over time. The section highlights risk groups as well as how the disease is influenced by risk factors in society. Also socioeconomic consequences are lifted.

### *Risk factors for development of obesity*

Risk factors for development of obesity in childhood is treated from several aspects including genetics and epigenetics to psychosocial factors.

### *Co-morbidity*

Obesity in childhood as well as in adulthood is associated with co-morbidities that influence the quality of life and future life and health. The profile of co-morbidities in children involves those seen in adults. Among them are: endocrine, metabolic and cardiovascular risks and co-morbidities. The course covers risk evaluation, investigation and managements of these.

### *Prevention*

Primary and secondary prevention of childhood obesity are covered with both a general and directed perspective. Further, different societal arenas will be covered such as healthcare, the child healthcare and the child daycare will come to be discussed. Based on possibilities and responsibility regarding prevention of childhood obesity.

### *Treatment*

Treatment modalities for both moderate and severe obesity that can be used in various aspects of health care, including behavioral modification, family therapy, physical activity, different types of dietary interventions, medical drugs and weight loss surgery. The treatment section also includes an assessment of the level of treatment and which investigation and treatment efforts that are reasonable in relation to the severity of the disease.

### *Psychological aspects and treatment*

Childhood obesity is a disease that can lead to psychological consequences and/or psychosocial strains for both the child and the family. Treatment as well as communication technique to help the families to handle the situation and optimise the treatment and prevention will be covered during the course.

The course is mainly theoretical, but practical parts are included.

## Teaching methods

The course is given partly at distance by means of an internet platform, where educational material is available and partly through compulsory classes located at the university. The teaching consists of lectures, seminars, group assignments, group discussions, internet activities (including recorded lectures,

quiz, discussions etc) and student presentations. Teaching support will be available during the whole course. In case of absence from compulsory components, written assignments can be used as a compensation.

## **Examination**

Written assignments and seminars during the course as well as final written examination. Students who do not pass a regular examination are entitled to re-examination on five more occasions. If the student has failed six examinations/tests, no additional examination is given. Each occasion the student participates in an examination session counts. Submission of a blank exam is regarded as an examination occasion. Examination session to which the student registered but not participated, are not to be counted as an examination session

## **Other directives**

Language of instruction is Swedish. Some literature and other course material are in English.

## **Literature and other teaching aids**