



UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Gnathology

2627-5-H4601D070-H4601D068M

Aims

The objective is to understand gnathology, which encompasses masticatory function but, more broadly, the functional anatomy of the stomatognathic system. This involves understanding the structures involved in the various functions of the stomatognathic system, namely swallowing, chewing, phonation, and breathing, as well as the generation and proper dissipation of occlusal forces on the skull.

Only by understanding the correct functionality of the system it is possible to analyze why the system becomes dysfunctional or, in other words, affected by signs and symptoms of an altered function that may evolve into a structural damage.

From this follows a second objective: the understanding of pain-related and dysfunctional pathologies of the stomatognathic system, describing their causes, clinical presentation, prognostic development, and possible therapies for gnathological dysfunctions.

An additional area of study concerns the correlations between the stomatognathic system and body posture, within the context of occluso-postural relationships.

Contents

Gnathology is the study of the masticatory function and the other functions of the stomatognathic apparatus, understanding the anatomical structures by a functional point of view.

Detailed program

Cranio-cervico-mandibular anatomy

TMJ anatomy and physiology

Functional anatomy of masticatory muscles

Functional anatomy of the dento-alveolar complex

Cranio-mandibular relationships:

- rest position and hinge axis
- centric occlusion
- protrusion and neuromuscular control
- sideshift and neuromuscular control
- retruded position
- Posselt diagram and gothic arch

The four principles of stomatognathic rehabilitation and their implications in clinical planning

The dissipation of occlusal forces in the skull

Other fixed occlusal basics of classical gnathology:

Bennett's Angle, Bennett's Movement and Fisher's Angle

Intercondyle distance

The variable occlusal basics of classical gnathology:

Antero-lateral guidances

The occlusal plane

The Von Spee's and Wilson's curves

The height of the cusps

Overjet and overbite

The Frankfurt and Camper planes

The mandibular movements

The masticatory cycle, the swallowing and the concepts of working and balancing side

The occlusal contacts in centric occlusion and during the movements

Analysis of the occlusal contacts and relevations methods (clinical and instrumental)

The distribution and absorption of occlusal forces

The mandibular repositioning concept

The dysfunctional pathologies of stomatognathic apparatus (DCCM)

The joint pathologies

The disc dislocation (with or without reduction)

Mandibular lockings

The neuromuscular pathologies

The gnathologic diagnosis

Anamnesis, examination and differential tests

Functional instrumental exams

Instrumental exams (X-rays, NMR, CT)

Prognosis

Gnathologic therapies

Drugs therapies

Physiotherapeutic and manipulative therapy

Relationships with other dental fields

Articulators

Body posture analysis

Relationship between body posture and stomatognathic apparatus

Headaches and migraines: clinical aspects and classification

Headache of dental and gnathologic origin

The cervical spine and the cranio-cervical dysfunctional pathologies

Other postural pathologies related to dental occlusion

Other postural therapies

Prerequisites

Completion of the examination in Human Anatomy, Physiology and Basic Pathology

Teaching form

Lectures with clinical samples. Stages in Gnathology department of Dental Clinic of S. Gerardo Hospital (Monza)

Textbook and teaching resource

L Fonzi
Anatomia funzionale e clinica dello splancnocranio
Edi.Ermes

Silvestrini Biavati
Trattamento semplificato in gnatologia
EDRA

Legall-Lauret
Occlusione e funzione

Masson

Papini

Origini, forma e (dis)funzioni dell'apparato masticatorio in Homo sapiens
Firenze University Press

Lecture notes created by the teacher

Semester

Second semester 5?? year

Assessment method

The oral examination method will be used for the knowledge and skills acquired.

Office hours

By appointment after phone or mailing contacts

Sustainable Development Goals

GOOD HEALTH AND WELL-BEING | QUALITY EDUCATION | PARTNERSHIPS FOR THE GOALS
