



Università degli Studi di Verona
Corso di Laurea in Scienze delle Attività Motorie e Sportive
A.A.2015/2016

<p>Course PHARMACOLOGY OF EXERCISE AND SPORT</p>	<p>Lecturer CRISTIANO CHIAMULERA</p>
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Aims

To teach students the basics of pharmacology important for the understanding of the risks and benefits associated with the use of drugs and substances. The course examines the mechanisms of action, effects, pharmacokinetics and adverse reactions of drugs with particular reference to some of the most commonly used classes in environment and motor sports.

Programme

1. General pharmacology

1.1. Pharmacodynamics

Drug interaction receptor, pharmacological potency, pharmacological effects, clinical effectiveness, competition and antagonism.

The receptor: definition, mechanisms of action, adaptation.

1.2. Pharmacokinetics

Absorption and the different routes of drug administration.

Distribution and blood levels.

Metabolism: induction, inhibition, drug interactions.

Elimination.

Concepts and pharmacokinetic parameters: dosage, maximum dose, daily dose, dosage, clearance, half-life, peak blood, therapeutic range, toxic concentrations.

2. Pharmacotherapy

Definitions of drug, placebo, medicinal product, packaging, pharmaceutical formulations.

The process of research and drug development.

Critical issues related to the use of drugs: tolerance, interactions, compliance, self prescription.

3. Therapeutic Pharmacology

Anti-inflammatory drugs.

Corticosteroids and derivatives.

Respiratory drugs.

Fundamentals of drug addiction.

Autonomic nervous system drugs

Anabolic steroids

Insulin, growth hormone, other hormones

Erythropoietin and blood doping

Growth factors and their use as muscle doping

Supplements adopted for sport

Examination procedures

The exam is written in the form of tests with multiple choice answers.

Recommended textbook

Slides used during lectures will be made available online at the end of the course as a support to the lecture and to the study.

The recommended textbook is

“FARMACOLOGIA per le professioni sanitarie” Conforti et al., ed. Sorbona

“Farmacologia Generale e Clinica” Katzung et al., ed. Piccin

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