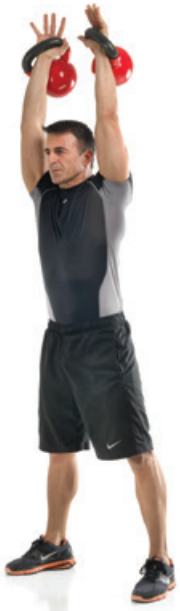
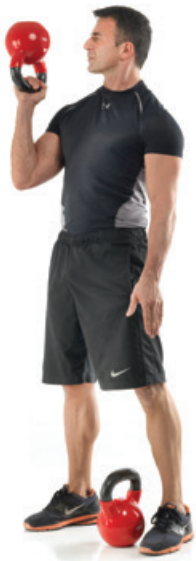
Guido Bruscia

TRAINING WITH KETTLEBELLS FOR STRENGTH AND MOBILITY

OVER 25 FUNCTIONAL TRAINING EXERCISES TO BUILD MUSCLE AND STAY LIMBER





The Ultimate Functional Training Series, Volume II

Training With Kettlebells for Strength and Mobility

The content of this book was carefully researched. However, readers should always consult a qualified medical specialist for individual advice before adopting any new exercise program. This book should not be used as an alternative to seeking specialist medical advice.

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FOREWORD

Ever since humankind appeared on earth, people have always interacted with the environment in their own way.

Civilization has brought infinite advantages to the life of human beings but has also made them weaker and more imperceptive. The senses of smell, hearing and touch, proprioception, and the various organic capacities have all undergone modifications in the course of evolution from our ancestors to the present day. The result is that, while on the one hand we live in heated homes, on the other, a gust of wind is enough to send us to bed with a fever (Marlo Morgan, *E venne chiamata due cuori*).

Galen, one of the fathers of medicine (131-201 AD), wrote in his work *De sanitate tuenda:*

"...This is what I consider as physical exercise or gymnastics, a term connected with the gymnasium, where people go to anoint themselves, enjoy a massage, engage in wrestling, discus throwing or other sporting activities."

More than one thousand years after that, Mercurial recommended discus throwing, rope climbing, race walking, mountain climbing, and long jump as the activities that had the most benefits. People used to train with more or less rudimentary weights: medicine balls, dumbbells, rocks, the trapeze, ropes and still rings.

An athlete had to be strong, fast, and resilient.

Today, the immense popularity of gyms has produced centers which are extremely well-equipped, sophisticated, and multifunctional. Often, fitness centers imitate outdoor activities with much theatrical effect; they have free-climbing walls meant to resemble jagged, rocky cliffs, water courses and machines that mimic walking, running, and cycling outdoors. And yet, from many quarters, we see signs of a trend in the opposite direction: woodland programs, treetop walks in the woods, life-trails in parks, and a return to body-weight exercises, in which the body is the main training tool. The growing popularity of functional training is a sign that something is changing.

Worn down by the stress of urban life, people are returning to their origins; they are feeling the need for a stroll, a run, a different kind of muscular workout unconstrained by machines or showy equipment. They are looking for woods or meadows.

Nature all around, and, overhead, the sky as the only limit.

INTRODUCTION

When we talk about education, we refer to a system of knowledge which involves different fields of learning and is constantly evolving.

Gym activity requires the knowledge of physiology, anatomy, and biomechanics. Knowledge of nutrition and supplements also has proven to have an influence on sports performance and on results, and not just in terms of achievements. Also, in recent years, several studies have overturned many ideas and misconceptions connected with the world of sports.

Knowledge is an imperfect journey, full of trial and error. To these facts we have to add, of course, exercise practice, an empirical science which is by no means a given. Contrary to most beliefs, practice does not make us perfect: It is perfect practice that makes us perfect. The objective of education is to create professionalism, a word which, today like never before, plays a fundamental role in a coach's assessment. A professional is someone who provides a unique performance. Let's not forget this.

WARNING

This textbook has been written with the average fitness enthusiast in mind.

For this reason, I have glossed over issues which aren't strictly germane to the theme and sacrificed the purely technical definition of several concepts in favor of a more direct, straightforward language.

Medicalese doesn't help in assimilating concepts.

RESOLUTIONS

In 2004, at a personal trainers convention, I lectured on:

"Functional training for the lower limbs: A new perspective." In subsequent years, I studied the functional subject in depth, comparing my findings with those of several gurus in the USA, Spain, Switzerland, Germany, Slovenia, and Italy.

Functional training changes your life. Not your sporting life, which is focused on the search for optimal performance or, accordingly, for hypertrophy and super-toned bodies. Functional training simply makes people feel better, making them more active, stronger, tougher. In a few weeks, you will notice that your health is changing and that your physical efficiency and the well-being you are enjoying today have reached new heights. All this is the result of an optimization of factors which contribute to building a new body. It will not just be a matter of being more toned; there will be the awareness of feeling efficient for the first time.

Your body is like a custom-made outfit: It is the best place to live in.

All you have to do is try.

PART I – THEORY

CHAPTER 1

THE LOCOMOTOR APPARATUS

1.1 PRESENTATION

Every time we think about a sporting activity, we associate it with the concept of *motion*.

This process is so widespread and natural that we don't think about its underlying reason *why*. During courses, students who are interested in and passionate about training sometimes ask me why it is necessary to know stuff that has no apparent connection with a horizontal bench or a squat.

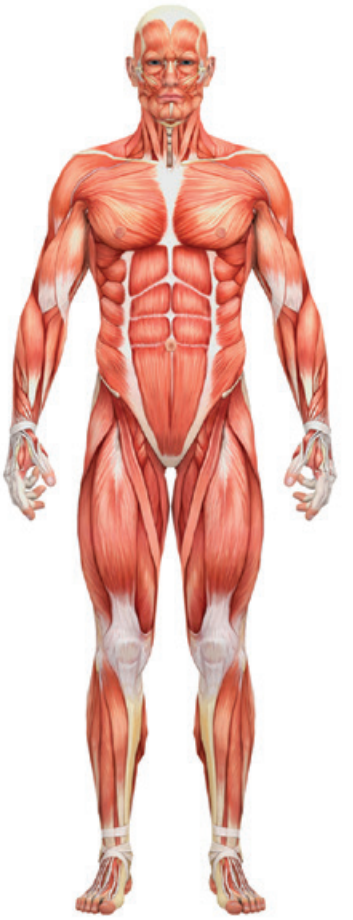
The answer is that gymnastics, in its broadest sense, is an empirical science; it stands apart from scientific bases which interact constantly with sporting exercise in gyms or outdoors. For this reason, you will often find not only various definitions, but also examples which refer back to practice.

The locomotor apparatus is the structure that allows a person to move in relation to space and the outside world. For practical purposes, it is subdivided into an active part and a passive part. The active part is made up of muscles, tendons, and ligaments. The inactive part is composed of bones and joints. Each is briefly discussed in the following sections.

1.1.1 The active part of the locomotor apparatus: Muscles, tendons, and ligaments

MUSCLES

The term *muscle*, from the Latin *musculus* (from *mus*, rat, because some movements are reminiscent of a rat darting about), indicates an organ made of biological tissue with the ability to contract.



The muscles are subdivided into:

- Smooth, or involuntary, muscles
  Commanded by the autonomic nervous system, they encase the walls of several organs and corporeal systems, enabling or improving their functionality with their contraction.
- Striated skeletal, or voluntary, muscles
  Commanded by the central nervous system, they encase the skeleton, and, by their contraction (shortening), they determine the bone levers' movement.

A peculiar type of striated muscle is the myocardium, which is commanded by the autonomic nervous system.

TENDONS

Tendons are bands of connective tissue with poor elasticity, and their function is to anchor the muscles to the bones. Their role is to transmit tension from muscles to the bone levers, thus allowing their movement.

LIGAMENTS

Ligaments are sheaves of connective tissue with varying percentages of collagen fibers that link bones at the joints. The ligaments' purpose is to limit articular movement which would risk creating lesions were it to continue. For example, the knee's collateral medial and lateral ligaments support the anterior and posterior cruciate ligaments in limiting the articulation's intra- and extrarotation movements in order to avoid lesions to the knee itself.

1.1.2 The passive part of the locomotor apparatus: Bones and joints

BONES

Bones are specialized tissues with great mechanical resistance. They are divided into:

- Long bones (humerus, femur, tibia, radius): These are composed of an elongated body known as *diaphysis* and by terminal extremities known as *epiphysis*; they determine raw movements, which are characterized by wide articular excursions.
- Short bones (vertebrae): They have a similar diameter in all three spatial dimensions.
- Irregular bones (facial bones, the patella): These bones are characterized by variable dimensions and shape.
- Flat bones (pelvis, sternum, skull): Their function is protecting internal organs.