Cláudia Sofia Ferreira Correia Minderico

WEIGHT-LOSS IN OVERWEIGHT AND OBESE WOMEN: MODELS AND METHODS TO ASSESS BODY COMPOSITION CHANGES

Preliminary Document
Dissertation presented to obtain a PhD in Exercise and Health

Adviser: Professor Doutor Luís Fernando Cordeiro Bettencourt Sardinha

Technical University of Lisbon
Faculty of Human Movement
2006

To my family,

to my husband and children,

friends and colleagues

CONTENTS

ABBREVIATIONS

BMI– Body mass index
DXA – Dual energy x-ray absorptiometry
ADP - Air displacement plesthysmography
BIA - Bioelectrical impedance analysis
$\mathbf{V_{TG}}$ - Thoracic gas volume
AT - Adipose tissue
BCM- Body cell mass
BM - Body mass
ECF - Extracellular fluid
ECS - Extracellular solids
FFM - Fat-free mass
LST – Lean-soft tissue
FM - Fat mass
%FM – Percent fat mass
SM - Skeletal muscle
TBPro - Total body protein
BW - Body weight
R – Residues
ECW – Extracelular water
ICW – Intracellular water
TBW – Total body water
TBK – Total-body Potassium
M – Total-body mineral
Mo – Bone mineral
Ms – Soft-tissue minerals
BMC – Bone mineral content
BMD – Bone mineral density
BV – Body volume
L – Lipid
Le – Essential lipids
G – Glycogen
CV – Coefficient of variation
TEM – Technical error of measurement
SEE – Standard error of measurement
PE - Pure error
SD – Standard deviation