

Summary

Senescence	1
Senescence: difference with aging	1
Cause and mechanisms of senescence (theories of aging)	3
Premature aging syndromes	7
Age-related diseases	8
Consequences of the aging of the population	9
Epidemiology of aging	9
Life expectancy	10
Human mortality	12
References	13
Physiology of aging	19
Scientific studies	19
Senescent changes with aging	20
• Body composition	20
• Cardiovascular aging	20
• Pulmonary aging	21
• Aging of the central nervous system	21
• Aging of the sensory system	22
• Gastrointestinal aging	23
• Urological aging	23
• Hematological and immune aging	24
• Locomotor system aging	24
References	25
Biological age measurement	29
Biological age and biomarkers	29
Biological age measurements	29
References	30
Genetic typing tests	33
Genes	33
Genetic typing tests	34
Genetic polymorphisms that predispose to	35
• Serum lipid disturbances and atherosclerosis Arterial hypertension	35
• Cardiovascular disease	36
• Deep vein and arterial thrombosis, Ovarian and endometrial cancer	37
• Breast cancer	38
• Prostate cancer; Lung cancer, Colon cancer	39
• Alzheimer's disease, Osteoporosis	40
• Obesity, Longer lifespan; Endocrine imbalances	41
References	42
Long life spans	51
Longevity categories and incidence	51
Average and maximum longevity	52
References	53
Lifestyle	55
Avoid unhealthy lifestyle habits	55
Adopt healthy lifestyle habits	56
References	57

Physical Activity	59
Dangers of being sedentary	59
Benefits of regular physical exercise	60
References	65
Positive emotions and attitudes	69
I. Positive emotions and attitudes in general	70
II. Specific positive emotions and attitudes	73
1. Acceptance of growing old	73
2. Optimism	73
3. Assertiveness	75
4. humor	77
5. Forgiveness	77
6. Self-esteem	78
7. Meaning of life	79
8. Well-being (including happiness)	80
9. Hope	84
10. Life satisfaction	86
11. Spirituality	88
12. Love (including loving attitude, friendship)	91
Conclusion	94
References	94
Improving sexuality	99
Enhancing male sexual potency	99
Enhancing female sexuality	102
References	103
Sleep	107
Sleep	107
Sleep deprivation	110
Beneficial effects of sleeping more	110
Adverse effects of excessive sleep	110
Adverse effects of traditional sleeping pills	110
Treatment of sleep disorders other than traditional sleeping pills	111
References	113
Light exposure	115
Light	115
Insufficient light during daytime	115
Improvement with bright light exposure	116
Avoid excessive light	117
References	118
Eliminating pollution and its premature aging effects	119
Environmental disease and clinical ecology	119
Indoor pollution	119
1. Outdoor pollution that becomes indoor pollution	119
2. Indoor pollution from the inside of the building	119
Toxic chemicals	121
The healthy building, free of chemical pollution	124
Make the building healthier by minimizing the toxic chemical load	124
Safer materials inside of the building	124
Avoid excessive humidity in the building	125
Avoid excessive dryness in a building	126

Avoid excessive noise	126
Avoid excessive heat or cold	126
Avoid electromagnetic pollution	126
Avoid heavy metal toxicity	128
Food packaging	130
References	131
Diets of vitality and long life	135
The best diet	135
The Paleolithic diet: All the advantages of all the other diets	136
The Paleolithic diet: Free of the nuisances of the other diets	137
Diets of long life	138
References	139
Healthy gut and digestion	147
Oro-Gastro-intestinal tract	147
Yeast	150
Protozoa	151
Helminths	151
Leaky gut	151
Food allergies and intolerance	152
References	153
Water	171
Water	171
Dehydration	172
Hydration	174
Contaminated water	174
Toxic drinks	176
Caffeinated beverages	176
• Adverse effects of caffeine	176
• Beneficial effects of coffee drinking	181
Cola drinks	182
Tea	182
Alcohol	183
Soft drinks	184
References	185
Macronutrients of the diet	189
Carbohydrates	190
• Healthy carbohydrates	190
• Unhealthy carbohydrates	196
Proteins	201
• Healthy protein-rich foods	201
• Unhealthy protein-rich foods	207
Fats	209
• Healthy fats	209
• Unhealthy fats	212
References	214
Nutritional Therapies with micronutrients	225
• Micronutrients	225
• Macrominerals	226
• Minerals: calcium, magnesium, phosphorus, potassium, sodium	226

• Fat-soluble vitamins and related compounds: vitamins A, D, E and K, coenzyme Q10, omega-3 and -6, polyunsaturated fatty acids, saturated fatty acids, cholesterol	233
• Water-soluble vitamins and related compounds: vitamins B1, B2, B3, B6, B7, B8, B9, B12 and C	245
• Trace elements: chromium, copper, iodine, selenium and zinc	257
• Amino acids: arginine, carnitine, glutamine, tryptophan, taurine, tyrosine	266
• Phytochemicals: carotenoids, flavonoids, phytosterols, resveratrol, DIM and indol-3-carbinol	273
References	280
Physical signs of micronutrient deficiencies	315
Hormone therapies	325
Multiple hormone deficiencies and corrective hormone therapies	327
Female sex hormone deficiencies and corrective hormone therapy in women	329
Male testosterone deficiency and corrective hormone therapy in men	353
Thyroid deficiency and corrective hormone therapy	367
Growth hormone deficiency and corrective hormone therapy	380
Cortisol deficiency and corrective hormone therapy	395
Aldosterone deficiency and excess and their therapies	407
DHEA deficiency and corrective hormone therapy	413
Melatonin deficiency and corrective hormone therapy	425
Overview: Daily treatment doses for hormone replacement therapy	437
Other hormone treatments	438
Physical signs of hormone deficiencies	439
Stem cell therapy	453
Basics of stem cell therapy	453
Applications of stem cell transplants	455
References	456
Balneotherapy	457
Thalassotherapy in spa's	458
Thermalism	461
References	463