PREVENT *the* DESCENT:

How To Eliminate The Single Most Prevalent Threat To Your Continued **Good Health**

By Carolyn Hansen

About Carolyn Hansen

Carolyn Hansen is a noted Holistic Health and Wellness Coach who hails from Whangarei, New Zealand where she owns an Anytime Fitness Gym. She has gained a reputation online as an authority on health, exercise and weight loss matters and is the author of several thousand health and fitness articles along with eBooks and programs that can be found **here.**

She has devoted more than three decades to the fitness industry, both offline and online, teaching people the simple secrets to getting into better shape, losing weight, and improving health.

Her main goal is to change the paradigm of health care from sickness care to wellness care and will be showing people how to live longer, healthier lives while avoiding the many mistaken beliefs and practices that diminish health and longevity.

She will encourage you to become stronger and stay that way through each decade of your life, maintain your health, wellness and vitality and to ensure your “health span” matches your “life span”.

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Introduction

As we go about our busy lives, muscle strength and bone density are not things we tend to think about very often. As we can't see or feel our muscles and bones we assume they are in good working order.

But we should think about it, because what we do or don't do in the years and decades before we get older to keep these body structures strong greatly influences our independence or dependence on others in later life.

For decades, the medical community has paid little attention to the loss of muscle mass that occurs as we grow older instead research has focused on the bone thief osteoporosis. Now age related loss of muscle mass and strength is getting more attention as tens of millions of Baby Boomers world-wide are approaching or are in their 70's.

All of the medical attention has been on osteoporosis and it could easily be called the young person's disease because it is before age 35 that the seeds of this insidious disease are sown. You may have thought osteoporosis only strikes little old ladies, but this silent thief is sweeping the world, largely due to unhealthy lifestyle habits starting in childhood and it is literally stealing our bones out from under us at astonishing rates.

There is a direct parallel between our increasingly sedentary lifestyles and the rising epidemic proportions of this crippling disease, and the thing is, if you lose muscle strength you will lose bone strength as well. And you will lose both if you don't work at keeping them over the course of your lifetime.

Unless we prevent it, our strength will drop by almost half by the time we reach 65 years. Research shows the greater the muscle tissue loss the higher the incidence of weak, thinning, brittle bones. Muscles are attached to bones and if they are not used and kept strong both grow weaker and lose density.

We have learned a lot with the passing years, we now know that these losses of muscle and bone strength are not a result of the aging process but merely the result of our inactive lifestyles...

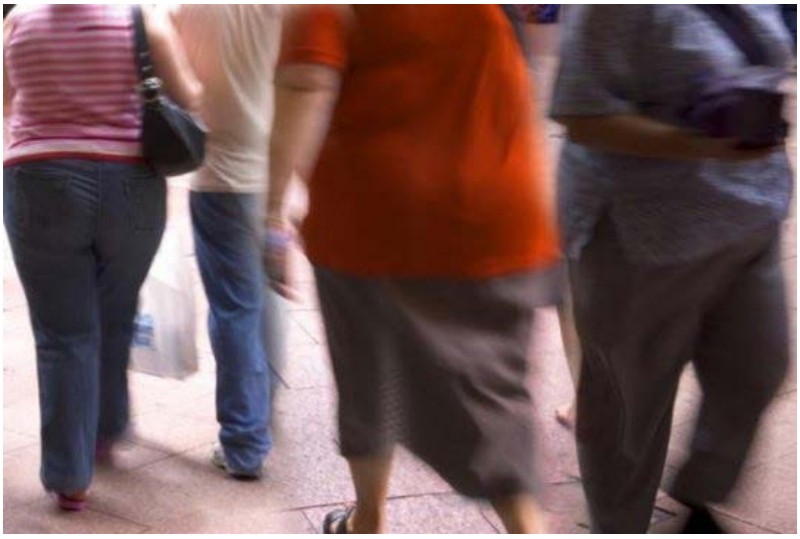
...and unlike other unchangeable aspects of getting older osteoporosis and muscle tissue loss is not inevitable. It can be prevented, slowed and even reversed if the proper steps are taken now, while you are young.

In this eBook we are going to be mainly talking about muscle and strength loss as it has a very large impact on the quality of our life in our later years.

Chapter One

The Serious Yet Preventable Health Threat You Should Know About

The slow, barely noticeable loss of muscle begins around age 30 with the rate increasing sharply around age 60. As sleek, firm muscle disappears, the metabolic rate (the rate your body burns fuel) is slowed, making it harder to control body weight, accelerating obesity and increasing the risk of life threatening diseases such as cancer, heart disease and diabetes.



This stealth like villain steals this muscle mass from its victim each year and if left untreated has the potential to ruin a person's life.

Its name is sarcopenia and the great news is that it is becoming a hot topic in aging research now that it is being realized what a devastating and debilitating effect is has on the quality of the last 20, 30, 40 years of a person's life.

As the proportion of older people in the population continues to grow, sarcopenia will have a dramatic impact on their lives and is predicted to be one of the biggest health problems the world faces.

If you are over the age of 40, it does mean you have a significant health threat looming that is completely preventable. This degenerative condition - the gradual loss of muscle and strength can eventually lead to frailty and disability. This is a condition that impacts around 30 percent of all adults and 50 percent of the elderly, leading to major quality of life disturbances.

There's a very good chance you have never heard of sarcopenia as most people haven't and it's only discussed among medical communities focused on this condition and hasn't yet reached mass awareness.

Yet it is a condition that is a major health crisis and which has devastating effects on our society, from the serious deterioration of well-being to the enormous costs in managing the related health outcomes.

Sarcopenia is a new syndrome that has become a heavily researched topic, and it is a huge potential risk factor for weakness, disability, and death in older people. As the world's population ages, the incidence of sarcopenia has also increased, which has resulted in a series of health problems and in large medical costs.

At the time of Queen Victoria's accession to the British throne in 1837, the longest life expectancy for women in the world's most developed countries was roughly 45 years. By 2015, it had increased to almost 87 - a gain of more than 2 years a decade.

Much of this improvement is the result of profoundly lower rates of child mortality. But something else has also changed: older people are living for longer. Since 1950, there has been enormous progress in bringing down death rates for people in their sixties, seventies and eighties.

The size of the older population worldwide is unprecedented, and the oldest of this group are the fastest growing segment of society. In 2000, 71 million people were over the age of 80, according to the United Nations Department of Economic and Social Affairs.

By 2030, that number will have increased to almost 202 million people, and by 2050, to 434 million. This demographic shift poses profound questions as to the ability of medicine to meet the health needs of the oldest strata of society.

The paradigm of modern medicine has all been about curing ailments and diseases, so the main issue has been mortality. This needs to change, as people age, function becomes more important than mortality.

In other words, maintaining the ability to live independently may trump the need to prolong life for this group of people.

Although 30 years has been added to the human life span, which is an unparalleled success story for public health, medicine and education it is also critically important that these people who are living longer stay healthy and are able to have a health span that matches their life span.

This makes perfect sense as the most meaningful definition of health is: Can you take care of yourself?

No one wants or expects to spend the last 10-15-20 years of their life needing a wheelchair and a nurse just to survive and have the most basic of human needs done for them as you can no longer do them for yourself.

Few conditions are more central to the erosion of people's independence than sarcopenia - the loss of skeletal muscle mass and function. It is a condition which in turn affects balance, gait and simple things like walking.

If left unchecked can essentially rob a person's ability to do basic life chores and normal day to day tasks and prevent a person from leaving their home, carrying groceries, climbing stairs or even rising from their chair and as it progresses leads to disability, pain, immobility and an inability to care for oneself.

These failures in daily living, as well as the falls that are associated with muscle weakness, are among the leading causes of admission to nursing homes and hospitalization among older people.

Muscle loss threatens a healthy lifespan. Skeletal muscle not only manages physical activity, but indeed, the biological role of your muscles goes far beyond mobility.

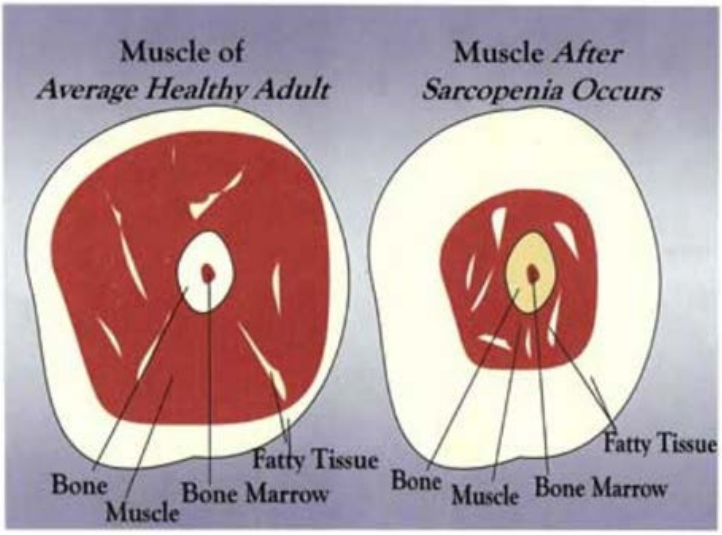
Your muscles are also responsible for keeping your metabolic system intact, and maintaining muscle mass helps protect you against metabolic and hormonal decline, obesity, diabetes, cardiovascular disease, keeps your circulation pumping strongly and slows down the aging process.

Typically as a muscle ages (if not worked and kept strong), it not only diminishes in size and strength, it also loses its aerobic capacity and is linked as a primary driver of insulin resistance in older adults. A less obvious side effect is that this loss of muscle mass can also lead to an overall decline in cognitive (brain) function and the onset of dementia.

Given the biological and metabolic importance of your muscles, age-related muscle degradation can herald a significant health crisis. In short, once muscle loss sets in, your health is on a steep downhill slope as it has the effect of downgrading all body systems and processes.

Loss of muscle equates to a general loss of physical energy, a tendency to gain excess fat weight (sometimes hidden as its on the inside), enhanced vulnerability to disease, and accelerated aging. Not to mention the general loss of independence that comes with being too frail to move around unassisted.

A healthy and active 60 year old can have the muscle mass of a 30-year old, while a sedentary middle-aged person who eats a primarily processed food diet and struggles with insulin resistance or diabetes may have the muscle quality of a 70-year old...



Recognition of sarcopenia as a condition of considerable concern for public health is, however, a fairly recent development. Doctors all know about renal insufficiency and heart failure and respiratory failure, but they have never thought about muscle failure.

It was only in 2016, when sarcopenia was officially recognized by the World Health Organization's International Classification of Diseases, that doctors could formally diagnose people with the condition.

Even in the light of these positive steps, sarcopenia remains a condition with neither an agreed on definition nor an effective treatment. One of their challenges is how to make sure that those added years are quality years.

In All But Name

Sarcopenia's emergence as a clinical concern can be traced to a specific event. In 1988, Irwin Rosenberg, the then-director of the Jean Mayer USDA Human Nutrition Research Center on Aging at Tufts University in Boston, Massachusetts, attended a scientific meeting on health in older people in Albuquerque, New Mexico, after which he was asked to write up his notes.

In these, Rosenberg called attention to a point that clearly had been neglected, given that it touched so many aspects of health. "No decline with age is more dramatic or potentially more functionally significant than the decline in lean body mass," he wrote. "Why have we not given it more attention?"

In answer to himself, and somewhat tongue-in-cheek, he offered: "Perhaps it needs a name derived from the Greek. I'll suggest a couple: sarcomalacia or sarcopenia."

Although the term sarcomalacia sank without trace, within a year, sarcopenia - meaning a loss or poverty of flesh - was the subject of a call for grant proposals by the US National Institutes of Health. "It was a pick-up of almost dizzying speed," Rosenberg says.

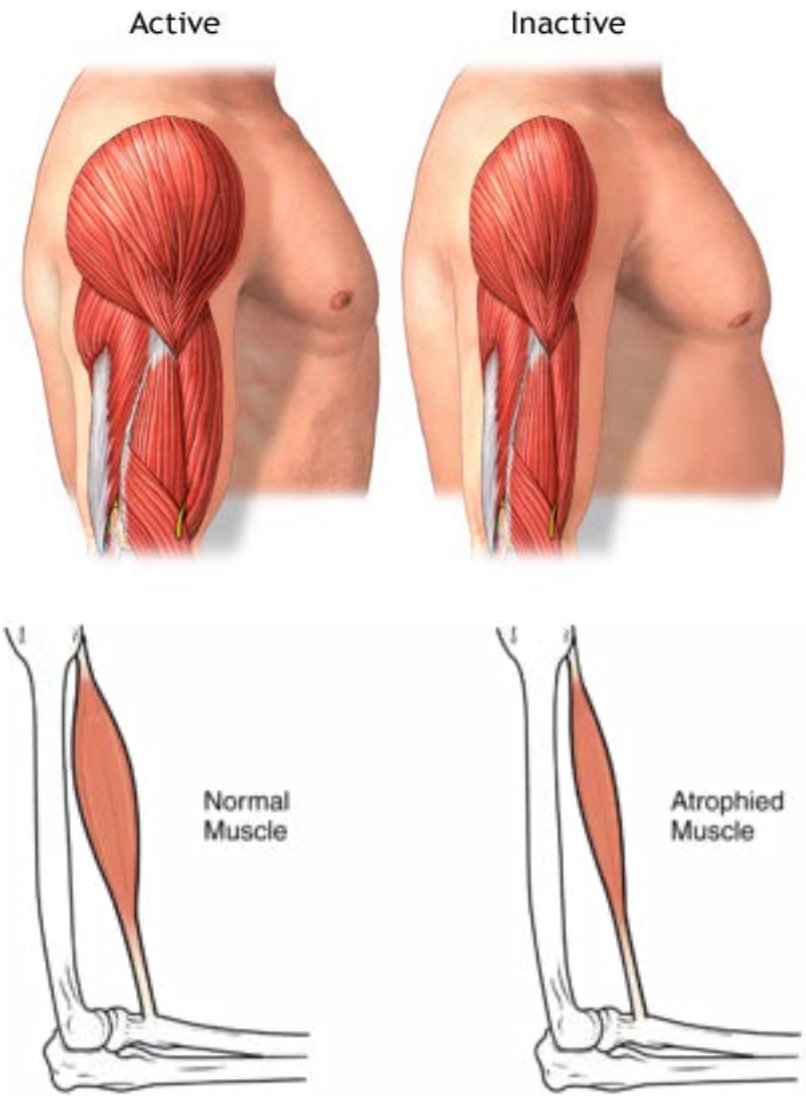
If the 27 years between the coinage of the term sarcopenia and recognition of the condition by the World Health Organization feels less dizzying, it is probably because establishing a disease category takes time. Before the medical community can develop treatments and prevention strategies, robust diagnostic criteria and the underlying disease-causing processes must be defined - neither of which was in place for sarcopenia in 1989.

One of the main difficulties in defining sarcopenia as a disease is that a degree of deterioration of the body has been taken as part and parcel of getting old for millennia. Muscle begins to form in utero, and then grows until it reaches a peak mass, usually in a person's late 20s. From then on, there is continual loss (if nothing is done to prevent it). Although slow at first, with age the process quickens until, in many people, it reaches a level that impinges on daily life.

Its Also The Cause Of Other Conditions

Sarcopenia has been linked to metabolic problems like type 2 diabetes, high blood pressure, and obesity. These conditions put you at greater risk of developing coronary heart disease, stroke, and other conditions that affect the blood vessels.

One of the primary factors associated with weight gain, joint pain and osteoporosis in men and women as they age is this villain condition that most people have never even heard of. And nearly everyone over the age of 30, who doesn't know how to fight it, is currently undergoing stages of sarcopenia. In fact, did you know that between the ages of 30 and 60 the average man or woman loses 15-20 pounds of muscle tissue?



Its interesting that one pound of muscle tissue can burn 30-50 calories per day. That could mean by the time you reach your 40's your metabolic rate has fallen by 150-250 calories per day. By your 50's it may will drop by 300-500 calories per day. And, if you don't do anything to counteract it, your resting metabolic rate may have dropped by up to 750 calories per day by your 60s!

It's no wonder so many people gain weight year after year. After all, by the time you are 60 you would have to eat 450-750 fewer calories per day than you did at 30, just to maintain the same body weight.

However, sarcopenia or muscle wasting - and the severe drop in your metabolism between the ages of 30 and 60 - can be prevented and reversed if you know the right steps to take.

Chapter Two

Physical Inactivity – How Not Moving Is Killing Us!

Society today is characterized by an increasingly inactive life. The social environment and the spread of new technologies reduce the desire for people to move or do more rigorous exercise.

This is reflected in the growing number of overweight children and the high rate of deaths of older adults associated with physical inactivity. The physical effort required in work and getting around has steadily decreased.

Cars, public transportation, elevators, Internet shopping, and the trend of cocooning promote a sedentary lifestyle involving little or no physical activity – and I like most, love a Sunday being a couch potato!

You are probably reading this and thinking “yes, tell me something I don’t know”, but let’s get into the nitty-gritty of why this isn’t a good thing and what it’s actually doing to our bodies.

So, what are the effects on the body from not moving?

Excessive inactivity enhances rapid disruption of normal function in tissues as well as cells and gene expression. The adverse effects of an inactive lifestyle and a lack of exercise have been verified by an enormous amount of epidemiological studies.

In detail, physical inactivity or a lack of lifetime exercise increases the relative risk of coronary heart disease by 45 percent, stroke by 60 percent, hypertension by 30 percent, and diabetes type 2 by 50 percent and an increased cancer risk.

Inactive and ‘un-fit people’ have a greater risk of developing high blood pressure. were twice as likely to have chronic fatigue syndrome (CFS) compared with active individuals and suffer increased feelings of anxiety and depression.

An exploratory study indicated that physically fit and active people are less likely to be lonely than inactive people, could it be the community they exercise with? The ‘switching off’ that most people gain from training and exercising? It’s not known for sure, but we all could do with feeling part of a community or “tribe”.

What Causes Sarcopenia?

If you believe this condition may not apply to you think again. It is easy to fall into the trap of thinking that this is an 'old age disease', but it is not, it starts early and only rears its head when the all too visible signs of the condition begin to appear.

Sarcopenia is most commonly seen in those with a sedentary lifestyle and while being sedentary is a major contributing factor, it is not the only factor.

As we age, there are a number of conspiring factors that contribute to the decrease in size and strength of our muscular system. From a decrease in hormones to a decrease in motor nerve cell activity to a change in the way our bodies process protein, the essential nutrient needed to maintain and build muscle tissue.

These conspiring factors create a vicious cycle that leads to reinforcing and accelerating decline. When sarcopenia is coupled with other age related diseases, its effects can be even more pronounced and if measures aren't taken to slow the progression of the condition, people with sarcopenia can often be left bedridden.

Do NOT Let This Happen To You

As already mentioned sarcopenia can be defined by both loss of muscle mass and loss of muscle function or strength. Its cause is widely regarded as multifactorial, with neurological (nerve) decline, hormonal changes, inflammatory pathway activation, declines in physical activity, chronic illness, fatty infiltration, and poor nutrition, all shown to be contributing factors.

Given that muscle mass accounts for up to 60 percent of body mass, pathological changes to this important metabolically active tissue can have profound consequences on the older adult and can also shorten life expectancy in those it affects, compared to individuals with normal muscle strength.

Sarcopenia is caused by an imbalance between signals for muscle cell growth and signals for teardown. Cell growth processes are called 'anabolism,' and cell teardown processes are called 'catabolism'.

For example, growth hormones act with protein-destroying enzymes to keep muscle steady through a cycle of growth, stress or injury, destruction and then healing. This cycle is always occurring, and when things are in balance, muscle keeps its strength over time.

However, with the passing of the years, the body becomes resistant to the normal growth signals, tipping the balance toward catabolism and muscle loss.

Sarcopenia is also associated with acute and chronic disease states, increased insulin resistance, fatigue, falls, and mortality causing a multitude of negative metabolic changes associated with decreased health and vitality. This premature loss of muscle mass and strength is due to insufficient physical exertion throughout a person's life.

The consequences of sarcopenia are often severe in older adults, as the strength and functional declines associated with it can in turn contribute to a number of adverse health outcomes, including loss of function, physical disability, frailty and is strictly correlated with poor quality of life and death.

In the coming years health care systems are predicted to be overwhelmed by the costs associated with this preventable condition and the diseases it precedes. Conditions such as obesity, osteoporosis, heart disease, cancer and diabetes along with the fragility and disability it leaves in its wake with a person needing highly specialised 24 hour long term care as they become incapable of simple things like feeding, walking and dressing themselves.

There is an important correlation between inactivity and losses of muscle mass and strength which has a huge impact on survival. It should be important to prevent or postpone as much as possible the onset of this condition, to enhance survival and to reduce the demand for long-term care.

As muscle accounts for 60 percent of the body's protein stores any decrease is directly responsible for functional impairment with loss of strength, increased likelihood of falls, and loss of autonomy

A person who has undergone this amount of lean muscle mass loss no longer has the sufficient strength to preserve excellent health. A hastened decline is experienced in the functional ability to carry out necessary and desired physical acts of day-to-day life.

This unfavorable result of muscle deteriorating is premature fragility and is not the result of getting old, but instead the result of lack of use.

Human beings, from the beginning of time, have had to exert themselves physically in order to stay alive. Up until about 100 years ago most individuals had to execute hard physical work almost each and every day.

The introduction of the 20th Century brought with it mechanization and computerization, which quickly replaced the physical demands of day-to-day life. After just a few generations most people in developed nations no longer have to perform any demanding physical work in order to live.

Humans were meant to move and are capable of extremely heavy workloads right up until a very old age. This is being proven by people of over 100 years old running marathons and cases of other incredible displays of strength being recorded. So becoming older does not necessarily mean becoming weaker.

Our modern day lifestyles have an almost complete lack of any meaningful activity but our bodies need this movement to stay healthy and strong and will last much longer with plenty of vigorous exercise. As we get older 'exercise deficiency syndrome' is the biggest risk we face.

The body does not actually know how old it is but it does know if we are not moving enough. When you exercise vigorously, your muscles release specific hormones that travel throughout your bloodstream, telling every cell in the body and brain to grow and stay strong.

Most of us now, every day, do almost nothing that requires forceful physical effort. Our bodies are built to work hard for continued existence and the most important way they renew themselves is with challenging physical activity on a regular basis.

If physical activity levels slow, the brain stops sending 'keep strong' signals to the muscles and instead inactive muscles produce chemicals that send instructions to weaken and decay. When the human body is not used it as it was designed it will waste away into a feeble, weak shell.

On the flip side, when you exercise vigorously, your muscles create and release special hormones that travel throughout your bloodstream, telling your cells to renew, replace and rejuvenate.

Chapter Three

Sarcopenia – A Disease Coming Out From The Shadows

The statistics are scary, 2 out of every 3 of us are obese or overweight, a ratio that is rising at a frightening rate. Part of the reason is this epidemic of sarcopenia. This premature loss of muscle mass - and strength - due to the lack of physical activity and an increase in sedentary lifestyles. This condition accelerates obesity and causes enormous physical disabilities as we age.

It's clear that the condition has a massive effect on your quality of life. This can be greatly improved by an effective exercise plan and proper nutrition. People who maintain a sedentary lifestyle following diagnosis of sarcopenia have a much greater and faster muscle mass loss.

The effect of the combination of these two diseases - obesity and sarcopenia - is horrifying. Obesity is not only harmful by itself, but it causes and leads to many other scary diseases, such as cancer, heart disease and diabetes.

Because of this horrible disease, many people, currently in their 50s, will eventually become dependent on others when they can no longer function with day-to-day activities – activities that should come easily and naturally like dressing, bathing and walking. These individuals have been robbed, not only of their life, but their dignity.

The sort of care needed, by these people, to simply function at an essential level does not come cheaply. They need extensive medical caretaking, and this need is increasing at a rapid rate – to care for those entering into this stage of life.

This has become an epidemic, not only locally, but around the world. It is a known fact that both of these diseases can be avoided so the question stands, how and why did we allow ourselves to become so cruelly unhealthy?

We may wonder why we haven't heard more about sarcopenia and its debilitating effects. Many attempts have been made to inform the public over the years, especially by the Fitness Industry but it spite of these attempts the topic still has a low profile and is not receiving the attention and publicity it deserves.

Could it be that the drug companies haven't developed a drug to build muscle artificially or prevent muscle loss yet? Perhaps more tellingly, sarcopenia's proven antidote, strength training exercise will never make any money for a pharmaceutical company.

Many people have been waiting for some sort of miracle drug or scientific breakthrough to save their health, but even if there were some available, medications will never enable us to achieve the high level of good health we are all yearning for.

Unlike the billions of dollars poured into research and development for drugs to treat osteoporosis, this has not yet happened with sarcopenia. Despite being common among older adults, awareness of the condition is low among people of all ages and many clinicians. As a result, it is underdiagnosed and undertreated.

In 2016 sarcopenia was officially recognized as an independent condition when it was assigned an International Classification of Disease Code, allowing healthcare providers to report sarcopenia diagnoses in medical claims.

This designation is helping to raise awareness and advance research towards treatments to slow, reverse, and eventually prevent the development of sarcopenia.

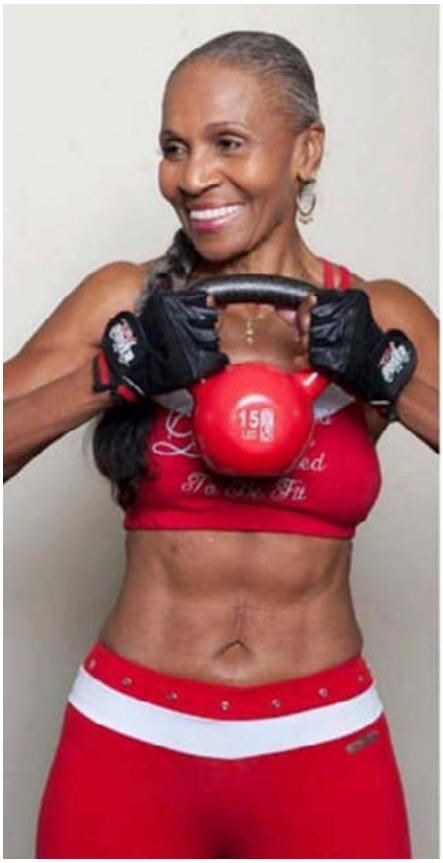
Below are some signs you might be losing muscle.

1. You are shrinking. You have unintentionally lost 10 or more pounds in the past year. You feel weaker - you find it more difficult to pick things up, open tight jars, carry things around and lift YOURSELF up. Upper body strength seems to go first, especially for us females.
2. You look softer and / or flabbier - This could be due to more body fat, but losing muscle is often another contributor.

3. Your waist is bigger even though you haven't gained a lot of weight on the scales. If your weight on the scales has not changed, but your waist measurement has, you can be pretty sure that you have gained some excess body fat and lost muscle.
4. You gain weight easier and faster than you once did. Some of the calories you consume each day go into building and or maintaining your muscle mass. If you have lost muscle, the calories that once went there have to go somewhere if they are not used up.

You can guess where … yep, that's right.. Body fat.

5. You feel exhausted. Everything you do takes a big effort, or you just can't get going three or more days most weeks.
6. Loss of balance. You sometimes feel unsteady or at risk of falling. Muscle loss/weakness and unstable joints can contribute to your loss of balance which can result in life changing injuries if you do fall.
7. Your overall activity level is low. This includes formal exercise plus household chores and activities you do for fun. You sit for more than 3 hours a day.
8. You simply look and feel older - If your body is getting weaker and flabbier, it does nothing to remaining a youthful version of yourself regardless of age. Muscle loss does NOTHING to enhance the way you look or feel.

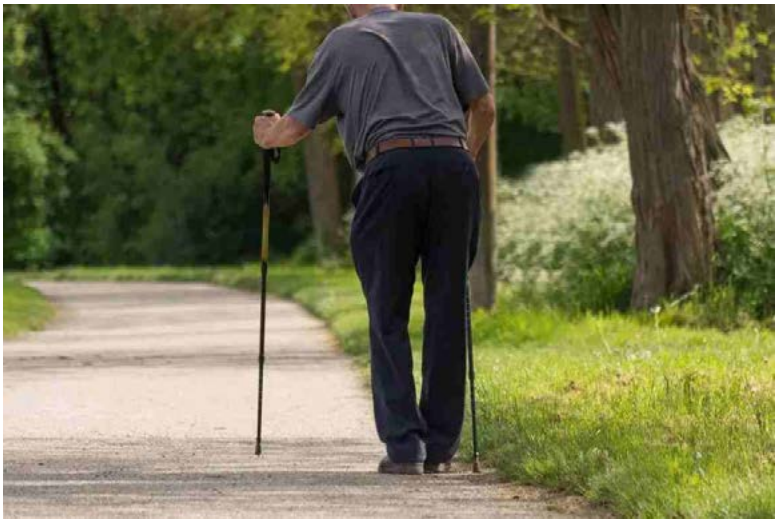


Both of these women are 80 years old. Your daily choices will determine how your future will unfold.

It's a fact, older people are the least active of all adult age groups. Also, 20 to 30 percent of people over 75 years of age are frail. These two facts are related.

What exactly is frailty? Frailty includes muscle weakness, reduced activity, and slow walking. Fatigue and unintended weight loss also are part of frailty. It usually follows other chronic diseases and aging problems.

The signs of frailty are obvious, even to the layperson. The frail often look 'as if a puff of wind could blow them over'. Their gait is slow and unsteady. Over the years, they seem to shrink in size, the result of muscle wasting as inactive and sedentary people as they age.



Typically the situation worsens over time, frailty often leads to more serious consequences, such as a disabling fall, even death. Frail people are, in fact, at higher risk of falls, and have a much more difficult time recovering if they become ill or enter the hospital. Putting a frail person in the hospital often is the beginning of the end.

What can be done? Evidence shows that regular CHALLENGING physical activity does the following.

It slows the changes of aging that impair the ability to exercise.

It optimizes age-related changes in the body, such as loss of muscle and bone and an increase in body fat.

It promotes psychological and cognitive well-being.

It helps manage many chronic diseases.

It reduces the risk of physical disability.

It increases longevity.

It allows greater independence.

It increases quality of life.

The benefits of regular exercise are clear. Exercise improves your function and health. It also offers economic and psychosocial benefits. Exercise should be a part of your lifestyle at any age. As you age, one of the best ways to reduce the risk of frailty and maintain independence is to stay active. This helps you maintain muscle strength, cardiovascular fitness, endurance, balance, and flexibility.

A good exercise program emphasizes these factors. The goal is to improve your well-being and your ability to care for yourself. Remember, you can improve at any age. A number of studies show that people in their 80s and 90s can improve their strength, cardiovascular fitness, and balance. When older people increase their strength, they also increase their overall level of activity.

We tend to think of muscular strength in someone who is young. When they are described as strong chances are it is about their muscle strength. But when someone past mid-life is called strong the chances are the subject is their character. Yet people of all ages need good muscle strength – it is not something just reserved for younger people.

The health benefits are vast for both men and women. The muscular system is at the very core of the body controlling many other systems and processes.

Nothing could be more important than overall body strength yet it is the first thing to be neglected as we grow older as many people think it is just not necessary to bother with intentional strengthening exercise. Nothing could be further from the truth and here are a few reasons why:

1. The condition of your muscles determines the rate your body can burn fuel (calories). If the muscles are allowed to grow weak, flabby and shrink, the metabolic rate drops and body fat accumulates (can be unseen on the inside). This then spoils your appearance and/or puts your health at risk.

2. Having strong muscles takes strain off the heart; they perform better with less oxygen which means the heart does not have to work as hard when you exert yourself. Strong muscles help blood circulation as their firmness and tone squeezes blood vessels as blood is pumped around the body and they act as auxiliary pumps. This reduces the workload on the heart.
3. Strong muscles support, cushion and protect the joints, like the knees, hips, shoulders and back from everyday wear and tear. Keeping the body's muscles strong is important for the prevention and treatment of the crippling condition arthritis.
4. Strong muscles also mean a strong immune system as that is where its fuel (special proteins) are stored that are used for the production of 'killer' and white blood cells. These are needed to keep the body's armour and defence system healthy.
5. Strong muscles make you look good. Lean toned muscles are taut and firm against the body as opposed to flab which sags and hangs. When you look good you feel good which boosts mental and emotional health as well.
6. Having strong muscles mean you live an active life which is only going to add to your overall health. Nothing drags your health down more than sedentary living, pulling you into a spiral of accelerated and premature aging.

Muscles Are Not Just For Looks They Are Crucial To Health

Many people have the notion that our muscles are just for looks and bodybuilders immediately spring to mind. But they are not just for looks and are very important for our general health as well. Their condition is vital for us remaining strong, functional and disease free right through our adult lives.

Most of us are not aware of the important link between our muscles and our immune system. In fact their health and strength is essential for the proper functioning of your immune system which could well save your life.

Everybody knows that the human immune system is responsible for fighting off colds and infections. But are you aware that it finds and destroys cancer cells? Not doing enough muscle building and maintaining activity especially as you get older is a recipe for poor health. Strong toned muscle tissue is crucial for immune system health in two important ways:

- Immune system strength depends on the availability of the amino acid glutamine and muscle tissue is the primary site in the human body where glutamine is formed and stored. The more toned muscle tissue you have the more abundant the supply is of this necessary fuel source for many cells of the immune system. Without it they cannot do their job keeping you protected from disease.
- Protein that produces the new antibodies and white blood cells to fight infection or find and destroy cancer cells is stored in muscle tissue. It is an essential reserve that the body can call upon if necessary.

If you do not take care of your muscles especially as you get older they will shrink and weaken and lose their ability to create the cells you need to fight off illness and disease.

The reason older people have such a hard time recovering from illness and injuries are that they have lost so much muscle tissue through disuse. They do not have the reserves of protein which is the building blocks of new cells and tissues.

So NEVER let yourself believe that your muscles are just for looks. They are your armour and protection from disease and the only way to keep them strong and healthy is with proper muscle building and maintaining exercise.

Conjure up a picture of what someone in their prime looks like. Would it include the following? A healthy, firm, well-shaped body, a quick step, good posture and a bearing that suggests confidence and enthusiasm, energy to spare and oozing vitality and a zest for living? Can we attain that youthful appearance and energetic condition no matter what our age?

The reason the body of a 60-year-old looks very different from that of a 30-year-old isn't just the wrinkling of its outer casing, but what's happening to the stuffing inside. When muscle and bone start shrinking, bodies sag, postures droop and aging speeds up at an accelerated rate.

Today, however, we know that many of the physical weaknesses in mind and body that make aging so oppressive aren't necessarily predestined. If we take care of ourselves properly, muscles do not have to shrink and weaken, bones do not have to become brittle, limbs do not have to become inflexible, backs and joints do not have to ache, metabolisms do not have to slow to a crawl and fat does not have to bulge and spill out from our clothes.

Those who understand the concept of self-care take charge and control their aging process, creating robust health, strength and a feel-good body, cooperating with nature to achieve their best genetic potential, and get to live with the enjoyment of feeling and looking their best.

Those that ignore this concept for whatever reason are creating the sickly, flabby, feel-bad, uncomfortable body that they end up being trapped in while they helplessly watch as their health and vitality slip away.

Father Time does take its toll on a body, but you don't have to sit back and let the effects of aging take place without a fight. You absolutely have the power to control how much and how fast the aging process works on your body. You can even reverse some of the damage that has already been done over the years or decades.

As already mentioned, the proven antidote to this decline is the very old concept of strength training exercise. Readily available for all to participate in, minimum skill is required to learn some basic exercises that can turn your life around.

Those who live a lifestyle of strength and fitness have far fewer physical and mental problems, avoid illness and disease, and enhance their years with a healthier and higher quality life. They are a sharp contrast to the flabby, out-of-shape, sickly masses who continue to spend ever increasing billions of dollars each year on medical expenses, doctors, specialists, prescriptions, diet pills, diet programs and yet continue to be plagued with an ever increasing rate of poor health as a result of them not being strong and fit.

Remember, muscles respond to strength training in exactly the same way - whether they are 60-year-old muscles or 20-year-old muscles.

In today's youth obsessed world, anyone who is strong and in great shape stands out from the crowd. They are admired for beating the curve, for taking control and achieving a high performance body and a healthy lifestyle. Anyone can break free from the shackles of aging and remain smokin hot throughout their lives. Let yourself be one of them.

Chapter Four

Is Sarcopenia Preventable / Reversible?

Physical Activity Makes Life Worth Living

A certain amount of age-related decline is inevitable but there is growing evidence that sarcopenia is very much preventable and that we can employ habits to maintain healthy levels of muscle mass well into our elderly years and thus maintain function and vitality.

The two most important strategies are around resistance exercise (strength training) and nutrition. Also, there is growing scientific support that increasing intake of protein and amino acids is vital. As we age we tend to consume less when we should be consuming more protein and of the types that are easier for our body to process and absorb.

The recommended daily intake of protein is 0.7 to 0.8 grams of protein per pound of body weight. Adding protein and amino acid supplements in the form of a shake or smoothie is one of the most common strategies to increase intake as they can be taken in between meals, are enjoyable and easy to digest and absorb.

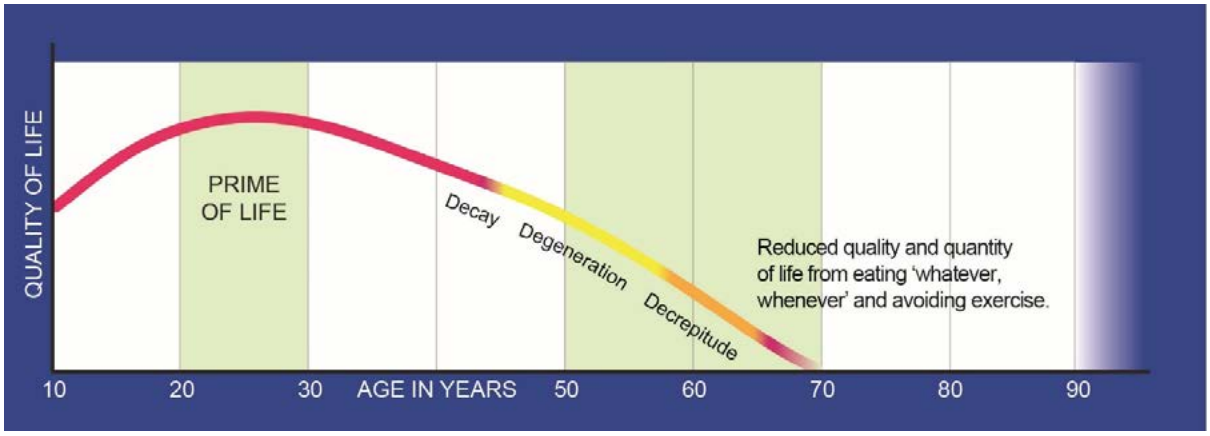
Its very good news that all health-conscious adults, especially those who have already surpassed the age 40, can take direct steps to implementing a routine that will greatly lessen their risk for sarcopenia, if not eliminate it. Strength training is the key to preventing sarcopenia.

It is the use of resistance training machines and/or free weights, which also involves a progressive increase in resistance against which a muscle generates force.

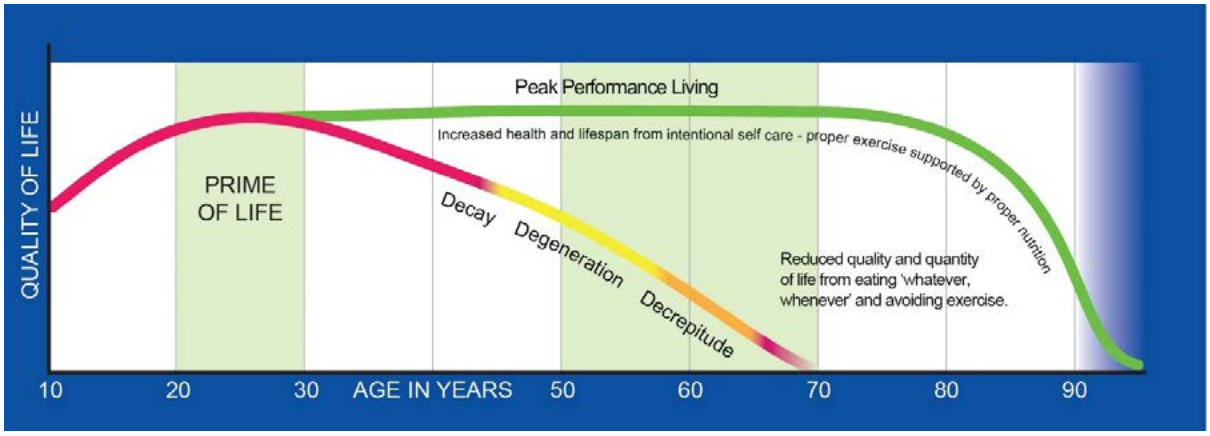
Putting some stress on the muscles helps them to build and remain strong and there are countless ways you can add resistance training into your regimen – from gym machines and free weights to bodyweight exercises to resistance bands. The key is to keep increasing the intensity and the load over time.

What we are trying to achieve here is to replace the activity that has been removed from our modern technology driven lifestyles. Our bodies still need this activity and cannot adapt and remain healthy without it.

Instead of using our body, we “rest” it even more, starting a very dangerous downward spiral. If you try and avoid it, the normal life span with a period of “disability” can be expected.



But if you implement intentional self-care into your life, look at the difference a proper exercise program supported by good nutrition can do.



Imagine what you can do with this quality time in the last third of life. More time with family, hobbies, travelling or even a second or third career!

By building and maintaining our strength and health continuously throughout our lives, you will be doing everything possible to avoid the nasty side effects of sarcopenia.

This type of lifestyle ensures your ability to care for yourself and guarantees your independence for many more years. Your quality of life will increase exponentially and the end of your life will be more vibrant than the alternative.

To create the necessary load to strengthen muscles and bones, proper exercise is essential. Not just any old form of exercise will do - recreational activities like running, walking, biking, swimming are great for just that, recreation, but do little to stress the skeleton to instruct it to grow stronger and healthier.

Don't be fooled into thinking other types of activity will take the place of strength training or give you the same results. These types of activities CANNOT be an alternate to strengthening exercise.

Mere movement, or 'any exercise is good enough', is not sufficient if you truly wish to prepare for your later years and beat off Father Time with a big stick.

Only strength training can halt and reverse muscle loss. There are no drugs, no health foods, and no recreational activities that will do the job. It seems so wrong that we need the huge marketing budgets of the drug companies for word to reach the public.

With proper exercise, you can maintain and build your strength and vigor throughout your whole life, from the inside out. Exercise is a medicine that you do not need a prescription for and that does not profit large corporations like pharmaceutical companies.

Although low intensity, high repetition physical activities are great for leisure and leading an active lifestyle they will not avert sarcopenia. Equally, strength training with weights that are too light, even when performing high repetitions, will not build or maintain muscle efficiently.

The weight must be heavy enough to provide resistance to your muscles for the stimulus and intensity to augment strength. This type of exercise also has the advantage of strengthening ALL of the muscles of the body also reducing the risk of bone shattering falls by improving balance and coordination.

This is very important as broken bones and hip fractures can have long-lasting effects and be life-changing, if not fatal events. Every year, one-third of people over 65 experience a fall. These incidents are one of the leading causes of trauma-related hospitalizations for older people.

These types of injury can increase death risk for up to 10 years after the incident and may be a catalyst for other adverse health events.

About 250,000 hip fractures occur among adults 50 and older in the US annually, with the average patient hospitalized for two weeks. Half the individuals hospitalized are unable to return home or live independently afterward.

So you can see how important strong muscles really are. The combination of the right exercise program and the right nutrition creates the right set of conditions to maintain muscle health and to create a virtuous cycle to combat sarcopenia and the related conditions.

Chapter Five

Strength / Resistance Training - Number One Sarcopenia Solution

It's a huge relief that sarcopenia is reversible. We can take action to potentially prevent, delay, and reduce the consequences and the toll sarcopenia and frailty can take on our lives. Medical science shows that strength training exercise done in a challenging manner is important to fight and prevent sarcopenia.

In fact, strength training exercise is the NUMBER ONE way to beat the insidious disease. It also reduces your risk of heart disease, diabetes, and certain types of cancer. Researchers around the world tout the benefits of strength training to combat sarcopenia, especially as we age.

Just 2-3 exercise sessions are needed each week as this type of exercise is so effective only a little is needed. The more effort you put into your sessions the less is needed and you will give your body a boost and 'wake-up' cells and tissues that are degenerating from lack of use.

You can even get away with one set of each exercise if you put enough effort into it, and it really pays dividends in so many ways. Strength training increases range of joint movement, increases muscle mass, strengthens bones, muscles, tendons, and ligaments, improves your practical ability to achieve every-day chores and activities, improves fitness and health, and helps prevent accidents, injuries, and sickness, and speeds rehabilitation if you do get injured.

Why you shouldn't wait...

When we are young or without disease or medical condition it is all too easy to fall into the trap of feeling invincible. Believing that the scary conditions we see are for others or something we don't need to worry about today.

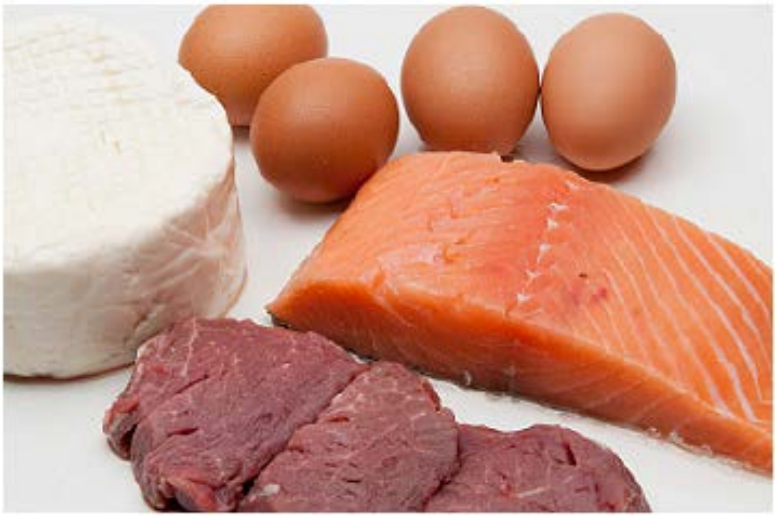
Sarcopenia is a very serious condition and you are at a very high risk – remember, nearly 30 percent of all adults and nearly 50 percent of the elderly have sarcopenia. You have a 50/50 chance of developing a condition that will significantly impair the quality of your life as you get older.

This statement is not meant to frighten you but to alarm you into doing something about a condition that is very preventable. It's about ensuring that you live the rest of your life fully mobile and full of vitality.

Muscle loss has a devastating impact on the human body. It slows down our metabolic rate, makes it harder for us to control our weight, weakens our bones, and leaves us more susceptible to diabetes and other killer diseases.

It also makes our years show. Nothing is more aging than the loss of muscle and the gain of body fat as we get older. It makes us look and feel much older than we actually are.

The two messages you should take away from this eBook – add strength / resistance exercise to your overall regimen as well as being more active during each day. Secondly increase the intake of quality protein and nutrient dense foods to your diet with the goal to maintain healthy muscle mass so we age well into our 60s, 70s, 80s and beyond.



The best way to limit the extent of loss of muscle strength is by staying physically active all through life. But if you have been sedentary and have lost strength, the answer is still proper exercise which is both a protective factor for prevention but also management of sarcopenia.

Sarcopenia is serious, the cure must also be; if you want your life back, these two things (proper exercise and healthy eating) is not much to commit to.

If you are deficient in calories, protein or certain vitamins and minerals, you will be at higher risk of muscle loss. However, even if you aren't deficient, getting higher doses of some key nutrients can promote muscle growth or enhance the benefits of exercise.

Simply add a basic strength training program to your current cardiovascular regimen or walking if that is what you are doing and you will reap priceless health benefits! You will need a well-rounded program that will strengthen all of your muscles, starting with the large muscle groups.

If you are over age 50 and have not been exercising, don't stress, there is good news. Regardless of age, you can begin a strength training regimen that will help you get your strength back; it is never too late.

As you age, make the right choice, choose to not take your strength for granted and always work to keep and conserve it. After all, the length of life is unimportant when you lose quality of life.

The goods new is you do not have to be a part of this, it does NOT have to happen to you! If all of us would take more responsibility and do our best to maintain our strength and muscle mass as we age we can conquer the preventable disease of sarcopenia and the misery it brings.

There are things, however, that we can do which will slow the aging process, reduce the number of years we live in poor health and potentially help us live longer. These things are simple, but proven and can be recommended to anyone who desires to look younger and enjoy life.

By building and maintaining strength and thus health continuously, older people will be able to take care of themselves and live independently in their own homes for as long as possible instead of being forced into a nursing home.

While it's best to start exercising early in life, several studies show it's never too late to regain some muscle strength. While many people focus their workouts on walking, cycling or jogging or other aerobic activities, that doesn't help counter the gradual deterioration of muscle strength.

Non-demanding activities such as gardening or bowling cannot provide the required stimulation and desirable benefits of a proper, structured strength building exercise program. Even if an individual partakes in a very active lifestyle, they still must include some 'proper' strengthening exercise.

What is proper exercise?

Proper exercise is defined as movement that takes the major muscle groups through their ranges of movement under an adequate load in a slow controlled manner.

Resistance training includes weight training with machines or free weights, resistance bands or moving parts of the body against gravity.

When you perform strengthening exercise, the tension on your muscle fibers results in growth signals that lead to increased strength. Resistance exercise also increases the actions of growth-promoting hormones all combining

These signals combine to cause muscle cells to grow and repair themselves, both by making new proteins and by turning on special muscle stem cells called 'satellite cells' which reinforce existing muscle tissue.

By building and maintaining our strength and health continuously throughout our lives, you will be doing everything possible to avoid the nasty side effects of sarcopenia, and leaving younger generations with a good example.

This type of lifestyle ensures your ability to care for yourself and guarantees your independence for many more years. Your quality of life will increase exponentially and the end of your life will be more vibrant than the beginning.

Imagine having lots of additional years to enjoy your friends and family or watch your children and grandchildren grow. How exciting is the idea that you can start that new career, or travel to anywhere you desire, but you must treat your health as priority.

Keep maintaining your strength, vitality and most importantly your independence and ability to do things for yourself so you can finish the race of life strong.

Chapter Six

Treat Your Health Like A Bank Account

You already know what makes a bank account unhealthy: too much spending, not enough income, or both. But have you ever thought about your physical health in these terms?

In a very real sense, you were born with a certain amount of credit in your health's bank account. Over the years of your life, you lose "credit" through unhealthy eating, a lack of proper exercise, sleep deprivation and the many other stresses your body endures. As you make harmful lifestyle choices, you are borrowing against your future. And after too much of this borrowing, a serious "lifestyle" disease may well be an unwelcome visitor in your life.

Why think of your health in terms of an "account?" Because it will help you become more resolved to make frequent deposits (such as choosing to eat a banana or an apple) rather than constant withdrawals (like opting for that candy bar.)

Each time you make a lifestyle choice, ask yourself whether you are making a deposit that will help you achieve lifelong health, or if you are dwindling your health account into a life-threatening recession.

What's the State of Your Health Account?

When assessing your bank account, a little bit of math is sufficient to determine its condition. But how do you determine the condition of your health account? These three categories will help give you an idea:

Super-health You are in the black in your health account	**Vertically ill** Still getting around but not feeling great. Your health account is sometimes dipping into the red	**Horizontally ill** In overdraft – in the red, in recession/bankrupt
boundless energy sharp mind positive outlook joy of living physically fit rarely/never ill full life contentment toned body high motivation feel-good body	constant tiredness low concentration mood swings sorrow, sad, anxiety unfit/exhausted by exercise run down/frequently ill easily overwhelmed dissatisfaction flabby on/off motivation aches and pains/body issues	chronic fatigue troubled/ confused depression pessimism unable to exercise incapacitated by illness life is hard work despair/life is against me over fat, under muscled low motivation levels feel-bad body

"Super Health"

If your health account falls under this category, congratulations! You are "in the black." Super Health means you are physically fit and have a firm, toned, feel-good body. Your great health gives you boundless energy; you feel fantastic and rarely get ill.

Mentally, you enjoy a sharp mind, positive outlook, and an overall joy of living. You are one of those people that others envy because of your "inner-joy" motivation and contentment. And, as a bonus, your vibrant immune system is busily working away giving you protection from the many diseases that are epidemic in our modern world.

"Vertically Ill"

You know you are Vertically Ill when you are still getting around, but often aren't feeling so great. You are tired, flabby, and unfit – which causes you to become exhausted even after a small amount of exercise. You often feel moody or "blue", and you have trouble concentrating. On top of all this, you have frequent aches and pains. If this describes you, your health account is slipping into the red and needs you to start making healthy deposits.

"Horizontally Ill"

If you fall under the Horizontally Ill category, your account is completely in the red. Think of this state as being bodily bankrupt. You are likely over-fat and under-muscled. You always feel physically depleted, tired, depressed, and pessimistic. Your constant fatigue and unwellness prevent you from any type of exercise, and you have little motivation to be active.

For you, there is little joy in life, its just plain hard work. Your body is in dire need of you making some healthy deposits and fast.

Get Back Into the Black

If your health account has fallen into either of the last two categories, the last thing you should do is give up! Instead of despairing, the time has come to dream of a better future. Just as small amounts of money add up, so will today's good lifestyle decisions.

A "use it or lose it" applies to just about every part of your body. Don't "lose it" because of inactivity and disuse. Start doing the things today that your future self will thank you for! You have got nothing to lose but your weight, aches and pains, fatigue and risk of serious disability or disease.

"You've got to exercise. Your health account, your bank account, they are the same thing. The more you put in, the more you can take out."

- Jack LaLanne

You Have Control Over the Process!

Anti-Aging care is fast becoming a high demand area of health care! More and more of the population is reaching mature age levels and wanting not only a long life, but a quality life as well. I think that optimally every person wants to live a long, robust, and active life. The way we live and how we meet our end is often a result of our lifestyle choices.

If I could recommend only one thing to you that would have the biggest impact on the way you look and feel and your enjoyment of life it would be strength training exercise as its vital when it comes to living an anti-aging lifestyle.

One of the main reasons for this is that it triggers the release of Growth Hormone, a hormone from the brain that naturally declines with age. It is believed that the decline in Growth Hormone and other hormones is responsible for a large part of the changes we see as we age.

The right exercise such as strength training releases natural human Growth Hormone. This is a protein hormone that is highly beneficial in rejuvenating the body, restoring energy levels and for strengthening the immune system reducing the risk of some life threatening disease that can take you out prematurely.

But only the right exercise done correctly coerces the rejuvenation of a healthy body by signaling the brain to change the metabolism. Better hormonal secretions from healthy glands tell the brain that strength is still needed and to maintain it. Strength training exercise is proven to be more efficient at stimulating the release of this 'youth' hormone more than any other form of exercise.

You will be rewarded with so many benefits you will be amazed. You can restore healthy levels of body fat, younger looking skin, you will become stronger and fitter and enjoy increased energy levels that will make you feel 20 years younger. Better overall health and increased longevity will then be yours for many years to come.

No one likes to hear this, but it's true. If you don't move, you die. Exercise fundamentally changes every system and function in your body. And the older you get, the more important it is - and the more pronounced the benefits are.

Chapter Seven

How To Implement An Automated Wellness Program In Your Life

Because it is well worth being constantly reminded of well-tested but often ignored techniques for maintaining our health I have created a program to help keep you on your toes when it comes to practicing the ideas of the super agers.

You will find that it is a way to stimulate your interest in pursuing those practices, like strength training, intermittent fasting, meditation, and several others that I have taught myself over the years.

If you can see the value of maintaining good health, rather than one day finding yourself in the position where you have to make a mad scramble of an attempt to get it back, consider the following.

It is very easy to read through an eBook like this one and find yourself agreeing with almost everything that has been said. Then the final page comes, you go on with your day, and nothing in your life changes.

Instead of doing this I would like you to consider COMMITTING to making the changes needed to begin putting yourself onto the path of the super agers using the same techniques outlined in this guide.

Do not wait for tomorrow. Allow my words today to be the instigating factor for change in your life and join me in my special program. The link to register and get started immediately can be found below.

It is not expensive. In fact, compared to the value you will derive from the health benefits associated with taking action today, the investment will be truly miniscule.

I'm ready. ARE YOU? Allow me to be your guide on this restorative transformation as we reboot, renew, and recharge your body and your life.

It will be like wiping the slate clean - and starting over from the beginning. This is how you take back control of your health. Can you imagine a more worthwhile goal?

It all boils down to this: Your body is your number one tool for ensuring both maximum longevity and the highest quality of life. In fact, it is like a Swiss Army Pocket Knife, filled to the brim with powerful, specialized and finely-honed life-preserving components that can be applied to solve virtually any health issue that you might run up against.

But ONLY if you keep the tool in good operating condition. This is what my program, the "Wellness Wakeup Call", is all about.

Using an ongoing series of "wakeup" calls which I send directly to your email inbox, my goal is to keep you apprised of what truly matters for the preservation of your health. Because ultimately it is up to YOU to continue to make the right decisions daily when it comes to your well-being.

If this approach sounds like something you would be interested in knowing more about, come check out my "Wellness Wakeup Call" trainings:

[Click here to learn how my Wellness Wakeup Call works]

For more tools and resources from Carolyn Hansen to assist you in attaining your goals and achieving the success you desire in life, please visit:

[Carolyn Hansen Fitness]