



AGE BACKWARD

PROVEN AGE DEFYING SECRETS

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CHAPTER 1

WHAT IS REVERSE AGING?



Chapter 1

What Is Reverse Aging?

Turning Back The Biological Clock

Who doesn't want to look young? The concern becomes more paramount as we start to advance in age and mature in years. But despite every effort towards advancement, the one thing that we as human beings have not been able to control is time. The clock keeps ticking and with it our biological age. And given our obsession with looking young, feeling young and staying that way, it is no wonder that a lot of research has gone into finding ways to stop the aging process. But before you can actually do the right thing to reverse aging, you need to get an idea of what is causing the change.

First, there are simple biological reasons that cannot be ignored or controlled (more like inevitable). For instance, aging is a natural process that occurs in all the body's tissues, cells and organs. These cells undergo changes with aging by becoming larger and less adept at dividing and multiplying. Among other things, there is also a growth in fatty substances and pigments that start to collect inside the cells.

At the same time many cells also lose their potential to function properly or may start to function unusually. A pretty dismal picture so far, most would think.



And then there are factors like outside influences which can be controlled (these are the ones we can work on and will discuss in much detail in this book). If you have lifestyle habits like smoking, enjoy frequent night caps, or like to pop a pill every time you sneeze, you may unconsciously be promoting premature aging. Also, if you are not someone who likes to exercise regularly, you have just added years to your real age and unfortunately, these will show.

The results can be less than pleasant; fine lines and wrinkles way before time, greying and thinning hair as well as weak and brittle nails.

However, as far as aging goes, most of us tend to be concerned with only half the equation; the superficial half. But aging is not only about looking good on the outside. If anything, it's about feeling great on the inside. If you are healthy on the inside, it will naturally reflect on the outside, giving you a youthful and vibrant appearance as well.

Of course, the way you appear to others is an obvious indicator of how successful you may have been in halting the aging process. But when you pair it up with feeling healthy on the inside, the benefits of reverse aging are boosted. A body that functions well, heals well and looks good too is the full package for successful reverse aging.

Advances in the medical field has allowed people to recover faster from illness and injury reclaiming their health back. It has also reduced the incidence of ailments and afflictions that were once considered fatal but are now fairly easy to prevent and treat. Plus, many of these have now been downright eradicated.

But while we may not be able to reverse the biological clock, we can do a lot to take better care of ourselves so that age doesn't show and we can still feel youthful.

Biological vs Chronological Age

Just to clarify things a bit, as humans we have two different ages. First there is the chronological age which is the number of years a person has been alive and starts with your birth date. And then there is the biological age which is how old a person seems. When we talk about reverse aging, it is the biological age that we want to retain and improve on, since the chronological one keeps ticking, no matter what.

It is also the biological age that takes into consideration lifestyle factors and habits. So while how we age chronologically is beyond our control, there are things we can do to improve on our biological age.

The Natural Approach to Reverse Aging

Reclaiming your youth does not have to be an impossible task. It can be as simple as changing the things we do to ourselves because the damage that we bring on ourselves is the easiest to correct. There are a number of ways that you can optimize your health and prolong your life.

Step One

This part of the reverse aging program deals with making dietary changes, boosting the immune system, reducing systemic inflammation and removing toxic waste from the body- all pretty basic stuff. In other words, this part of the damage control is up to you. You are in charge and play an active role in how effectively you can reverse aging, but more about that in later chapters.

Step Two

The second part of damage control involves preventing and reversing damage at the cellular level. This component of reverse aging may not totally be up to you as factors promoting aging are genetically programmed in your cells. Having said that, there are still some proactive measures you can take to prevent damage at the cellular level.

For one, you can incorporate more exercise into your daily routine to keep circulation moving, the heart pumping well, and the lymphatic system flowing freely. This will, among other things, nourish and replenish your cells well.

Second, you can invest in some quality anti-aging products that will work internally to regenerate cells and minimize aging effects. A lot more on this in upcoming chapters.

Step Three

The final step in this process addresses hormonal changes that affect aging at a macro level. Hormones are the body's chemical messengers telling the body what to do and when. With regards to aging, hormones tell the body how to age and any fluctuations in hormonal levels affects aging.

While hormonal production cannot be completely dominated by any single treatment, you can make small but sensible changes to *restore* these imbalances. Some basics to boost the body's ability to create and balance hormones include changing lifestyle and dietary habits while staying away from common stressors and detoxifying.

And then of course, there is all that hormonal therapy that you could get involved in, but do you really to go there?

Instead follow a sensible age reversing protocol that will help you better control the way you age. These basics can not only prevent and reverse chronic illnesses but also the signs and symptoms of aging.

In this book we will look at the different factors that affect the production of collagen, on the external front, concerning the look and feel of skin. On the internal front, which is equally important, we will look at what is crucial to keep you young and healthy on the inside.

CHAPTER 2

THE SCIENCE BEHIND REVERSE AGING



Chapter 2

The Science Behind Reverse Aging

While a lot of research has been done on the subject, a recent one was actually successful in reversing the process of aging in mice. The study indicated that not only did the mice appear younger but that their lifespan was extended by approximately 30 percent. And while the study has only been done on mice, the researchers are hopeful that the same would be ready for human trials within ten years.

Epigenetics

The basis of this research was something called epigenetics. By definition, this means the study of inherent changes in gene function. As we move through life, our genetic makeup changes in many different ways.

For instance, outside factors such as environmental pollutants like smoking or lifestyle habits like alcohol and drug dependency can bring about changes. And with a change in our genes, our bodies change as well. When the body changes, it starts to age.

Whether these changes promote a predisposition to an inherited condition such as heart disease, diabetes or arthritis or create a new condition that the body remains unable to recover from, such epigenetic changes supply a lot of information for why these things happen. And when scientists find out why these changes happen they can work on a way of stopping them from happening, or even reversing them such as in aging.

Scientists have also determined an age reversing agent known as nicotinamide adenine dinucleotide or NAD⁺. This compound was present more in younger mice than older ones and is very important in repairing DNA damage. There is also another DNA repair agent called PARP1 which responds well to NAD⁺ levels in the human body. So the higher the NAD⁺, the more PARP1.

Younger individuals, much like younger mice, have higher levels and these levels start to fall as people age. This, in turn, makes it harder for DNA to restore itself. So with this in mind, scientists gave more NAD⁺ to older mice and sure enough, they started to appear younger, biologically.

As a takeaway, research findings concluded that by changing adult cells into their earlier stage, reverse aging may be set in motion.

But that is for the scientists to do. As for your part, what you can do to reverse aging is to take better care of yourself to stop cellular damage at different levels. Once your cells are working well, they are in a stronger position to repair DNA themselves and stop aging prematurely.

What Else Does Science Say?

Science has a whole lot more to say about reverse aging, but we will only look at some basics here. Just enough to get an idea about established research into the topic.

Genetic Component

Looking for a way to halt aging has undoubtedly stepped into science labs to unlock the mysteries of aging. In fact, research believes that not only may we be close to stopping aging but actually reversing it as well.

For starters, as mentioned earlier, your genes have a big role in how fast or slow you age. But because genes are something beyond your control, here is what you need to know about genes affecting the aging process.



DNA research has shown that specific genes are responsible for aging. Collectively dubbed as '*late life cyclers*', this set of genes activate only in later life or during bouts of intense stress. Stressors related to aging such as molecular and cellular damage, oxidative stress and even some disease states cause these genes to respond. Plus some of these genes have been studied to be more active in individuals with cancer, creating more responses in such people and signalling a higher level of distress. All of this activity will quickly age you taxing not only your looks but also your health.

The same set of genes are also activated if something called the circadian rhythm is out of sync.

Circadian Rhythm

One of the elements that needs to be maintained well is a person's circadian rhythm. This is roughly your 24 hour cycle, or body clock which determines your physical, mental and behavioral patterns. In other words, daily routines from waking up to going back to sleep all fall within your circadian rhythm. It is also known as your sleep/wake cycle.

So what you do during this sleep/wake cycle can actually determine the state of your overall health. Your circadian rhythm works best when you have regular sleep habits such as going to bed at a good hour and waking up early in the morning (incidentally, the circadian rhythm also coincides with sunrise and sundown).

With your circadian rhythm disrupted, eating and sleeping patterns can run amok which will naturally have a say in how you age. So as a heads up for what's coming on later in the book, it is important to eat and sleep well to reverse the effects of aging.

Hormonal Decline

Hormones are natural chemicals produced in one part of the body, released into the bloodstream and then used by other organs and systems.

These hormones also start to get out of whack as we age. Typically, the levels of hormone production in the body start to slow down as you near 30. In particular, regulatory hormone production like estrogen and testosterone declines and many bodily function/ features start to get affected.

There are different hormones involved in the aging process like adrenal, thyroid, sex and metabolic hormones. Together, they are responsible for a wide variety of health concerns like body composition, bone health, energy levels, and brain function among many others.

These declining hormone levels make the body less capable of regulating these functions as we start to experience age related symptoms like cognitive decline, weight gain, lower muscle strength and endurance as well as dry skin and hair loss.

CHAPTER 3

BENEFITS OF REVERSE AGING



Chapter 3

Benefits of Reverse Aging

This chapter will take a look at all those aspects of aging that can actually be prevented if you become successful in reversing aging. That means considering many conditions that are directly related to the aging process. Typically starting from middle age and going all the way into your senior years, these age related issues can stop you from taking part in life to the fullest.

So, apart from the obvious advantage of looking good, a person who can successfully reverse aging will also be spared from many of the debilitating conditions that come with aging.

There are also people who believe in 'aging gracefully', thinking of aging as a natural phenomenon and not doing anything about it. But more and more people have now started to realize the importance of freezing their age or reverse aging. This can be especially important in terms of the ability to lead an independent life without having to rely too much on others. Some of the health benefits of reverse aging can include the following.

Preventing Cognitive Decline

The term cognition refers to the thinking, learning, interpretive and perceptive function of the human brain. With growing age, the cognitive functions of the brain see a decline just like the rest of the body. There are countless cognitive disorders that are linked to age.

The most commonly known ones include dementia, Parkinsonism and Alzheimer's disease. While some of these do have a genetic predisposition, others do not. Even those that are linked to genetics can be delayed in their onset or prevented all together with reverse aging.

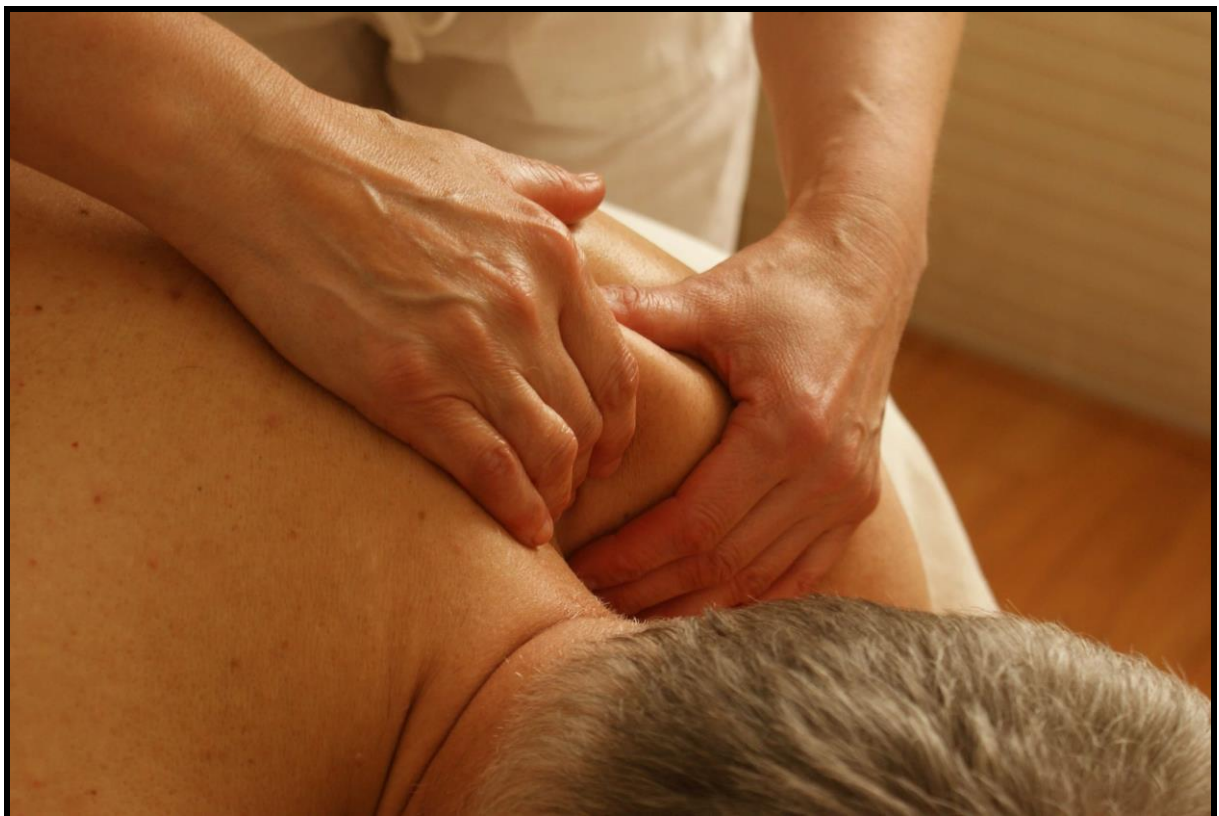
Just like aging in other parts of the body, the brain is also susceptible to cellular damage, but when you start to take better care of yourself through diet and other lifestyle practices, you can help your brain keep its health intact.

Whether your reverse aging therapy includes supplements, diets or other lifestyle changes all can help in preserving your health at the cellular level. As science has already established, the healthier your cells, the better you age - or even stop aging.

Preventing Immobility

There is a very famous quote by George Burns that says, “You know you're getting old when you stoop to tie your shoelaces and wonder what else you could do while you're down there.”

As we grow older, this makes more and more sense to us. And this is not just for the elderly. In fact even for those in their 30's or younger, physical work may bring with it back pain and joint pains- a warning sign that aging is well on its way.



You may also start to experience small inconveniences like achy, sore muscles after the slightest bit of physical activity, when mobility is no longer smooth and painless anymore. Just think of how often you end up using painkillers every other day or are just too tired to move around for anything.

Reverse aging can prevent all this. Internally, cellular health does its part while externally you can engage in physical activity suited to your level to keep your muscles and joints mobile. Think yoga, tai chi or aquatics if you want to take it easy or go for the extra burn by jogging, running or cycling.

Preventing Frailty/Sarcopenia

Frailty is the term used for being weak and delicate, and sarcopenia is a medical term that means a loss in skeletal muscle mass. Of all types of muscles, it is the skeletal muscles that can be directly improved by exercise. Reverse aging exercises and physiotherapy can be of great importance in preventing these two conditions. Frailty is seen as a very common issue among the elderly, but it need not be so for you.

By nurturing good lifestyle habits, you may actually be able to sidestep or even reverse frailty. Think reverse aging where even

simple practices like walking every day and easy strength training moves can help delay age related loss of muscle mass.

As far as frailty is concerned, not only does diet and exercise help, but keeping the mind active and the attitude positive can be highly beneficial. One research study by John Hopkins regarding frailty revealed that keeping social connections alive along with pursuing to learn may also translate into a lower risk of frailty.

That is also why people who keep themselves engaged mentally and physically are able to sharpen their thinking skills while improving their physical functioning as well.

Preventing Immune System Deterioration

Reverse aging is simply not possible with a compromised immune system. So, to effectively reverse the aging process you need to keep your immunity in top notch functioning mode.

As the rest of the body deteriorates with age, the immune system is no different. With time the cellular processes that comprise the immune system get slower, less effective and less efficient. This is why the probability of contracting a disease and of the disease

worsening increases with age, another consideration that factors into age-related decline.

Not only does the body become more susceptible to illness, it also loses its ability to produce a strong and effective immune response.

Reverse aging would mean a great deal for the immune system as it would keep the system younger. In other words, enabling it to work as effectively as it did at a younger age. This is beneficial for keeping all kinds of illnesses at bay.

Improving Cardiovascular Health

Cardiovascular health includes all things related to the heart and vessels of the body (arteries, capillaries and veins). As the person gets older, the cardiac muscles of the heart and the muscles in the vessels get weaker. Depending upon various factors, the vessels might get occluded as in atherosclerosis due to over consumption of fatty foods.

This means that the heart has to pump blood with more force for it to get through to the tissues. The extra load on the heart will

contribute in its weakening and reduced ability to function. The vessels also lose their elasticity naturally with age.

Of course, in reverse aging, this will not be the case. One of the biggest benefits of reverse aging is that it keeps the heart and vessels safe and healthy. It prevents many diseases, from mild hypertension (high blood pressure) to seriously fatal myocardial infarctions (commonly known as a 'heart attack').

Promoting Independence

After considering what reverse aging can prevent, here is a look at what it can promote as well. And this is kind of an important one since it does not have to do with physical wellbeing alone but mental wellbeing as well.

It is given that anyone getting older starts becoming more and more dependent on others. However, this need not be the case. As long as the person is healthy, age is really just a number and reverse aging proves this in many ways.

For someone who is old, but can still move around on their own, does not need someone to babysit them all the time. They need

not be sent to an old home for better care if they are able to manage perfectly well on their own.

Reverse aging can help everyone keep the independence that they had all their lives without having to be monitored and fussed over all the time.

CHAPTER

4

**LIFESTYLE
CHANGES**



Chapter 4

Lifestyle Changes

Phasing Out Destructive Habits

So now that you have the basics in place, such as why aging happens and how you may benefit from reversing the process, let us now take a look at implementing changes that will actually help you reverse the aging process.

But before we start, just know that everyone doesn't age the same way. In fact, there are a number of reasons why the pace at which anyone ages is different from the rest.

One way that you could be speeding up your aging process is by certain lifestyle choices that you make, more specifically, the bad habits that are injurious to health in so many ways.

If you have any of these bad habits, you are only fast-forwarding your aging:

Smoking

Smoking of any sort or form adversely affects almost every biological system in your body. It is no secret how it affects the lungs; damaging lung tissue, obstructing air passages and rendering lung tissues incapable of performing their main function: the exchange of oxygen with the inhaled air.

It is this very oxygen that the blood carries to all the tissues to keep them healthy and active. This also includes the skin.

If the oxygen is compromised, the body will automatically provide the bulk of it to the vital organs (brain, heart and liver), instead of the skin. With this poor supply of oxygen to the skin, the epidermis of the skin is unable to keep healthy or to regenerate. It can no longer form adequate proteins such as collagen, which is the main factor responsible for the elasticity of youthful and healthy skin.

As a result, you get wrinkles, dry and damaged skin that make you look years ahead of your age.

All the irritants in smoke harm various tissues and organ systems. Some of their unpleasant visible effects on aging is that they cause the white part of the eye, nails, and teeth to yellow,

dull and lose their natural color. Giving up smoking can greatly help in reversing aging.

Alcohol Consumption

Alcohol consumption is perhaps one of the worst offenders if you want to keep your inside out looking and feeling young. Too much alcohol can easily make a person in their 20's, look like forty- thin, weak, pale, bags under the eyes coupled with the overall neurotic behaviour and mental breakdowns. The effects of alcohol consumption on aging go much deeper than just skin. The organ most affected by this is the liver.



The liver is a vital organ, and its failure could potentially lead to death. One of the functions of the liver is to detoxify the body. As alcohol is a toxin, the liver has to work extra hard to remove it from the system. Excessive alcohol consumption will exhaust liver cells so they are unable to function. Not only alcohol increases physiological toxicity, but the failure of liver to fight these other toxins will speed up the process of aging twenty times!

Sugar Intake

It is very common to associate sugar intake with obesity, diabetes and other health issues. But it is less common knowledge that sugar fastens your aging process as well.

Glucose, the simplest form of sugar, is the main substrate for energy in the body but its excess can lead to a number of complications. It can cause wrinkles by dehydrating the skin and can also cause dark circles to appear under the eyes. Glucose metabolism produces AGEs (Advanced Glycation End-products). Appropriately named, AGEs can cause your skin to look old and saggy.

A high sugar intake will age more than just the skin. All the organs have to work more to metabolise that extra sugar and will exhaust much faster than the normal, natural pace of aging. For example, a person who is genetically more susceptible to diabetes mellitus might develop it at thirty five years of age. Had he been precautionous and careful with sugar intake, he might not have developed this disease at all.

While glucose is extremely important for the body, its excess will most certainly age you faster. It is advised to visit a nutritionist to help determine your body's sugar requirements.

Sitting Too Much

In this day and age, most of our day involves sitting down for hours. Be it working in an office, studying in an academic setting, or even just sitting and doing nothing at all, there is too much sitting going on in the day. Whether you are being productive or not, sitting for hours can cause aging to creep up on you.

More specifically, epidemiological evidence proves that those who sit for more than 10 hours a day age 8 years faster. Imagine, being only 30 and looking 38. Or being 40 and looking 48! Petty

scary stuff, most would agree. This is why you must try to move around as much as possible.

Forget the elevator, take the stairs. Never mind the shortcut, walk the longer route home. Make sure to move around every hour even if you have piles of work at your desk. This will help counter aging effectively.

Binge Watching and Binge Eating

Bad news for all those who binge watch- it can make you age faster! There is actually a thing called 'The Netflix Face' by experts. This is characterised by wrinkles, spots and fine lines. The screens of mobile phones, laptops and other devices emit harmful radiation that penetrate into the skin and damage it.

Like previous lifestyles mentioned above, this one also does not stop at the skin alone. Binge watchers should be wary, because this bad habit is causing their brains to age faster too. It can greatly affect different functions of the brain, causing attention deficits, concentration deficits, bad memory, and slower processing and comprehension of information.

Binge watching and binge eating are a bad combination which, if not controlled, can be very dangerous for health. Avoiding it will help you age slower.

Poor Posture

While this does not exactly show signs of aging on the face, it does so inside the body. The posture affects how well blood is being pumped in the body and also how well a person breathes.

For someone who is used to "slumping" all the time, straightening up will immediately reveal what a difference good posture makes. An upright and erect posture is very important in controlling aging. Bad postures lead to problems that are mostly seen in adults and are now experienced by youngsters. For example, back aches, pain in joints and breathlessness.

It is important to maintain good posture at all times to avoid the development of such signs of aging.

Using Too Much or The 'Wrong' Makeup

Pay attention ladies. As much as you may love the difference that makeup can make to your appearance and confidence, it is also one of the biggest culprits in premature aging. The internet is loaded with tutorials that show a person putting on layers upon layers of makeup, so much so that it is hard to keep up!

With that amount of makeup, comes the removal and cleansing process too. No matter what an excellent brand you take help from in this regard, it is still mostly chemicals that will rob your skin of its natural moisture and components, dehydrate it and cause wrinkles.

Applying makeup unnecessarily makes you age many times faster. To avoid this, it is important to use makeup as minimally as possible.

A Boost for Self-Esteem and Confidence

After all the reasons why reverse aging is beneficial for the maintenance of healthy systems in the body, comes what *looking* younger can do for you.

Nobody likes to look or seem old. 'You look much older than your age' is definitely not our favourite compliment. People invest so much time, energy and money to avoid things like these. The appearance of the first wrinkle or grey hair can be quite depressing.

Reverse aging can take away all such worries and give your confidence and self-esteem a boost. You look what you feel. If you feel younger from the inside, you will look younger too. It is not just the skin that needs to look vibrant and young to make you feel better about yourself. Reverse aging, by any means takes away many such insecurities and worries.

CHAPTER 5

FOOD AND DIET



Chapter 5

Food and Diet

“You are What You Eat”

The visible signs of aging can get to the best of us. Even the strong hearted may not be spared the agony when it comes to noticing their first ever grey hair, first fine line or the loss of skin volume and elasticity.

If you are like most people, you may have thought that the first wrinkle on your face was going to take you downhill from there. Or if you have been impressed by the effects of cosmetic surgery celebrities, wondering if looking young would be worth using up all your savings for, you are wrong. You do not need expensive surgeries, creams, or treatments to age reversely. But what you do need is food.



That is correct and it doesn't get any simpler than that. Without ever actually realizing what a significant difference our diet can make in reverse aging, we have a tendency to opt for less reliable and potentially harmful methods to look younger.

While eating the rainbow in all its glory will do wonders for improving your overall health, our particular concern is with foods that halt the effects aging. So here are some top contenders that can produce noticeable effects on how well you age.

Tomatoes

Tomatoes are great for reverse aging, especially the skin. Tomatoes have a very large quantity of carotenoids in them which have been studied extensively to protect and shield from damage caused by sunlight.

UV light forms free radicals of the naturally occurring and otherwise harmless elements in the atmosphere. These free radicals, in turn, can react with our skin among other things, damaging, drying, exhausting and eventually causing premature aging of the skin.

The specific carotenoids in tomatoes also naturally inhibit the enzyme collagenase that breaks down collagen in the skin. Collagen is important for strength, whether it is associated with skin, hair or any other tissue of the body. If it is maintained in adequate amounts in the skin, it makes the skin stronger and more resistant to factors that cause aging.

Using tomatoes in their raw form, can help gain maximum reverse aging benefits.

Green Tea

Green tea already has an established reputation as an effective weight loss agent but its benefits do not stop there. In fact, you can also add in some green tea to your reverse aging regimen to look years younger than your biological age. This particular benefit is derived from the anti-oxidant properties of green tea.

Tracing it back to its roots, green tea is said to have come from China, hence the legend of a Chinese monk who lived for almost 150 years. When he was asked by their king how he had lived for so long, the monk is said to have thanked tea for it.

This little tidbit might be nothing more than a folktale, but the fact remains that modern research has indeed proved the old monk right.

Various oxides and radicals produced by the normal metabolism of oxygen in the body exert stress on the skin. They attack the skin, making it weak and fragile, also causing it to lose its elasticity.

All of this eventually presents distressing effects as aging. Here, anti-oxidants in green tea can help in eliminating these radicals and limit the harmful effects that lead to aging.

Yogurt

Yogurt is known to be full of nutrients like calcium, vitamin D and many proteins. It is known to be of great use for stronger bones, healthier hair and softer skin. Yogurt is also a very important food for reverse aging.

Yogurt contains lactic acid, which can do wonders for your skin because it destroys dead skin or epidermal cells. It also works very well to minimize the harmful effects of over exposure to sunlight and moisturizes the skin to keep its natural elasticity for a younger looking you.

Aloe Vera

This list would be incomplete without the magical Aloe vera! Aloe vera gel can be found in pure forms, creams, oils, ointments, shampoos, you name it. But, it can also be used as a drink. Among its countless uses in the body, one is reverse aging. Drinking aloe vera gel everyday can literally freeze your aging process!

Aloe vera is an excellent promoter of collagen synthesis, which as discussed earlier, is very important to reverse aging. Aloe vera also detoxifies your body, removing many toxins from your gastric and intestinal systems. Many of these toxins would otherwise cause premature aging.

Not only does Aloe vera increase the production of collagen, it also inhibits the natural or excessive breakdown of collagen in the body, making sure that your skin gets all the collagen it needs to look soft, supple and younger.

Avocados

Research has shown that the avocado without doubt, is a superfood when it comes to reverse aging. Avocados also have anti-oxidant properties but what makes them more effective than other foods is that they can penetrate to the cellular level and exert their effects from there.

Mitochondria, present inside every cell are known as the energy factory of a cell. A cell will get all its energy to perform various functions from mitochondria. While generating this energy, mitochondria also produce some free radicals that harm the

cells. Avocados can limit the production of these free radicals and assist in reverse aging by limiting the body's own by-products that would otherwise cause premature aging.

The many nutrients found in avocado help in the rejuvenation of the skin, so that dull and damaged skin is replaced by healthier and younger looking skin.

Apples

As the saying goes, 'An apple a day keeps the doctor away'. Well, an apple a day also keeps aging away. Apples are packed with vitamin C and vitamin B complexes. Apples work essentially for rejuvenation, regrowth, and 'damage repair' in many capacities.

Vitamin C is the best promoter of new cell synthesis so it helps new cells replace their exhausted and worn out old versions. This gives skin radiance and glow, reducing the signs of aging. Apples are also full of anti-oxidants that help in reverse aging.

Brussel Sprouts

Brussel sprouts can rightfully be called the key to reverse aging. They have a very high ratio of vitamins, minerals and antioxidants. They also have a lot of water in them.

As mentioned throughout, free radicals are the real culprits behind natural aging and premature aging. Brussel sprouts hunt these down (quite literally) and eliminate them, preventing and greatly slowing down the process of aging.

The large amount of water present in Brussel sprouts also helps maintain healthier, well hydrated skin which in turn helps in reverse aging.

Fish and Fish Oils

And excellent source of protein, fish and fish oils are rich in omega-3 fatty acids. These are fatty acids that the body cannot produce on its own and they have to be acquired through the diet. Among the many reasons why the body needs these, one is to fight aging.

With age, the epidermis of the skin gets weaker, fragile and less elastic. This shows the signs of aging on our face in the form of wrinkles. Omega-3 fatty acids help the skin to maintain its biochemical integrity by keeping its water and nutrients in check. Fish and fish oil are also beneficial in fighting the aging effects of UV rays.

When taken in through diet, fish and fish oils help in overall protection and maintenance of health, which is important for reverse aging.

Nuts

All nuts help in reverse aging. They are full of healthy fat and omega-3 fatty acids that are essential in slowing down the signs of aging. Nuts are also rich in vitamin E, which helps prevent cellular damage of any sort. As such, it aids in preventing skin cell damage that would otherwise show signs of aging.

Nuts are also anti-inflammatory and so they reduce the chances of many skin conditions like acne or eczema. These diseases exhaust the skin and make it age much faster than normal.

Consuming nuts can be a good way to avoid this and in turn, achieve the goal of reverse aging.

CHAPTER 6

DAILY ROUTINES



Chapter 6

Daily Routines

Okay, so time to admit that every day, with every passing hour, all of us age. However, it is not hard to notice that some people age slower than others, almost like those who tend to 'reverse age'.

More often than not, it is attributed to the magic of good genes or the result of cosmetology treatments. While both of these could be a contributing factor in any individual's case, it is not so for everyone.

But what can work for everyone else are the little changes in daily routine which can play a vital role in reverse aging. Developing a set of good habits and routines that do not tax your body, mind and skin unnecessarily can work really well to stop rapidly approaching age in its tracks. Here are some ideas how:

Proper Sleep

Often sidelined, proper sleep is one of the most important factors in overall health. As mentioned earlier, the body's health functions are naturally attuned to circadian rhythms. For any adult, a good quality sleep for at least 8 hours every night is very important. This also plays a role in helping one age slower.

Other than the aging effects it has on the brain and rest of the body, sleep deprivation can lead to the skin aging many times faster as well. The importance of this can be understood by the fact that even a single night without sleep makes a person look tired and older right away. Multiply that by many times for those who do not get good sleep, and during the right hours.

Exercise

Exercise is one of the best solutions to the reverse aging process. The increased blood supply to all the tissues of the body, the strength of the heart increasing and an overall freshness that comes with exercise is invaluable to reverse aging.

In fact, studies have shown that a person who exercises regularly has the advantage of looking nine years younger than another of

the same age, but not physically active. Research has also shown exercise to slow down aging on a cellular level. This means that every cell of the body will age slower, have a longer life in the system, and will also be less prone to infections and mutations.

For those who find regular exercise to be too much work, even gentler versions like yoga and tai chi can be useful. There are a number of yoga tutorials and guides on the internet that are specifically linked to aging issues.

Meditative practices like yoga can improve health in many ways. It reduces stress, improves cardiac functioning, enhances breathing capacity and eventually helps in taking years off your face! Yoga also helps the body maintain its flexibility which it loses gradually with age. And the best part is that this reverse aging tool can be used anytime, anywhere.

Sunscreen Application

While all-natural vitamin D and soaking up the sun seems so good, it can come with a lot of unwanted baggage. In fact, the adverse effects of too much sun time take their first toll on the skin.

This refers to free radicals that are created due to UV light, that literally break and kill cells. Not only do these rays help in breaking down healthy cells, they can also cause mutations in their genetic structures, which can lead to serious health problems including cancer.

Apply sunscreen. Sunscreens do actually work and protect from UV radiation. For every person, the SPF may vary. It is always advisable to use a dermatologist recommended sunscreen, instead of randomly picking one up. Sunscreen acts like a shield that protects against the rays of the sun and can be very beneficial in the process of reverse aging.

Adequate Hydration

This is by far the most important, yet often neglected aspect of younger looking skin; keeping it hydrated. The more water you drink, the more youthful your skin will be. Every person's water requirements vary, so to say that eight glasses of water is good for everyone would not exactly be accurate.



Instead, how much water you need depends on your age, weight, climate around you, and level of physical activity among other things. The better your skin is hydrated, the more it will glow and maintain its elasticity.

It is important though, that drinking excessive water is not very ideal either. It only puts more pressure on the kidneys that have to excrete it out. So drink *adequate* water, neither too little, nor too much.

De-stressing

Everyone faces stress at some point in life, be it about work, about a loved one's health, income or problems in any relationship. And most people can relate to the fact that stress can make a person look much older.

Stress is also considered one of the leading causes of premature aging nowadays. Most people have too much on their plate and too little time to actually deal with the stress and relieve it. In this process, they appear to age many times faster.

The brain is connected to every single part of the body, including the skin. Anything affecting the brain adversely shows on the face in one form or the other. For instance, one very common example is that bout of pimples you get during exams.

So de-stressing becomes paramount when it comes to preserving your youthful looks and good health.

Socialising

To be very clear, this is not a reference to posting on your friend's timeline, or commenting on their Instagram post. It means

actually going out and hanging out with people. Not socialising leads to the person becoming lonely and depressed.

And nothing ages you faster than stress. It has been shown through research that loneliness doubles the risk of early death as compared to obesity. Loneliness is an extremely unhealthy state of mind that will reflect on an individual's looks and persona in the form of dark circles, dull and wrinkly skin, to say the very least.

The depression that ensues from not socialising enough can lead to hypertension, insomnia, night terrors, and many other disturbances in the body. With serious effects such as these, it is impossible for it not to affect the skin and make the person look much older than their real age.

Home-cooked Food

The diet plays a vital role in reverse aging. Simple changes to the diet can take off years from the face. However, this is not possible if you eat out most of the time. There are not many healthy options when eating out and the quality of products being used is not known.

In this scenario, eating at home is a safer and much more beneficial option. Home cooking comes with the obvious benefits of knowing what is going into your meals. You have the liberty of adding in all the anti-aging super foods you want and cutting down on all the wrong fats and cholesterol. You can add in more fruits and vegetables to your meals instead of up-size fries.

These little alterations in meals will make all the difference and help you achieve your reverse aging goals.

CHAPTER

7

**BEST INGREDIENTS FOR
YOUNG LOOKING SKIN**



Chapter 7

Best Ingredients for Young Looking Skin

Choosing Skin Care Products Wisely

With so much emphasis on the skin, it is now time to talk about skin care strictly. One of the worst choices to make for your skin is to randomly grab a beauty product off a shelf and decide to give it a try.



Firstly, it is important to consult a dermatologist and get some counselling and professional help in your aim to reverse aging. Secondly, it is always a good idea to do your own research and be aware of the age defying ingredients used in products that claim to reverse aging. Some of the most potent ones you should look for include the following:

Retinoids

Retinoids work in a number of ways. These are actually one of the chemical forms of Vitamin A and are readily found in numerous beauty products, even those that are not specified for reverse aging.

Retinoids work by simply speeding up the regeneration process of skin cells. They make weak and exhausted skin cells die faster and make room for new healthy cells to replace them. In addition to that, they reduce the breakdown of collagen.

Retinoids also reduce the production of melanin, the naturally occurring skin pigment, keeping the skin from darkening. All these properties of retinoids help in reverse aging as they reduce the incidents of acne breakouts and other skin problems, help fight wrinkles and help regenerate the skin cells.

Salicylic Acid

Another ingredient to look for in skin care products is salicylic acid. Salicylic acid is used in almost all anti-acne treatments. However, it is underestimated when it comes to its age defying properties.

Salicylic acid is actually a vital ingredient in products for reverse aging. It is available as an age defying ingredient in many lotions, creams, ointments and gels. It aids other products to absorb better into the skin, optimizing their effectiveness.

Essentially, salicylic acid works by increasing the turnover of skin cells by making the old and worn out cells die faster to make way for new cells. This helps in adequate production of collagen, which keeps the skin elastic and wrinkle-free. This action also improves the texture of the skin significantly, making it smoother and more even.

Caffeine

You can rely on caffeine to not only keep you alert, but also keep you looking young. Not only does it make the mornings more tolerable and less grouchy, it is in fact a very good age defying ingredient in many beauty products.

Caffeine has very high anti-oxidant activity. It helps get rid of free radicals, whether they are a by-product of natural body metabolism or from the UV radiation in the atmosphere. These free radicals, if not removed by anti-oxidants, attack healthy cells of the body either by destroying them or causing them a loss of their functionality.

In addition, caffeine also has anti-inflammatory properties. It reduces inflammation by causing vasoconstriction or constriction of blood vessels. So when it is applied locally over an inflamed area, it constricts the blood vessels and reduces the blood flow to that area, gradually reducing inflammation.

It is especially used in reverse aging products and serums for eyes. These products aim to reduce the puffiness and sagging of the under eye area.

Green Tea Extract

Green tea extracts are known to have a very 'soothing' and cooling effect. In fact cold green tea bags are said to be an effective remedy for inflamed or saggy skin. Green tea extracts are used in age-defying products too.

Green tea is rich in 'polyphenols' that help fight free radicals, protecting the skin from their damage. It keeps the skin clear from fine lines and wrinkles.

Green tea extract also helps limit the damage caused by the sun, which is a key factor in reverse aging.

Epidermal Growth Factor (EGF)

The body has numerous epidermal growth factors, depending on their site of action. The epidermal growth factor for skin is used in many age-defying creams, lotions and serums to reverse aging. The epidermal growth factor stimulates renewal of skin cells. It also enhances the appearance of the skin by promoting death of old and exhausted skin cells.

With growing age, the normal cell turnover rate in all body tissues is reduced. The skin is no different. Epidermal growth factor works to stimulate this to give an overall youthful and more vibrant appearance to dull and aging skin.

Coenzyme Q10 (Ubiquinone) also known as Vitamin Q

Co-enzyme Q10 is an extremely important agent in the process of reverse aging. Vitamin Q works as an anti-oxidant, getting rid of free radicals that kill cells in different tissues of the body, including the skin.

By depleting the levels of free radicals in the skin, Vitamin Q decreases the breakdown of skin. This in turn reduces the 'thinning' of the skin, thereby strengthening it and making it stronger against other aging factors. It not only stops the excessive break down of skin cells, but also promotes the growth of new ones so that the skin is more vibrant, youthful and softer.

Vitamin Q in anti-aging products greatly increases the probability of these creams, lotions, and serums to work. It is

also a safer option than synthetic chemicals that are not natural and may have certain adverse effects.

Argireline

Argireline is a somewhat infamous ingredient in anti-aging and anti-wrinkle creams and serums. It works in a different way from the other ingredients mentioned above works by inhibiting muscular movement. It does so on a smaller scale but is sometimes called 'Botox in a jar' (Botox does not work the same way. It works by paralyzing the nerve supplying a particular muscle.

Wrinkles are formed on the face due to the overlapping, shape and inter-relations between muscles. Those are the wrinkles naturally present and do not form with age. Argireline inhibits muscle movement to some extent and helps reduce such wrinkles.

It is one of the most beloved ingredients used in products for reverse aging, and rightfully so.

Grape Seed Extract

Grape seed extracts carry polyphenols that find and fight free radicals damaging the skin. It also improves the activity of vitamin C, which is known to have countless benefits for the skin. It is readily absorbed in the skin and has exfoliating properties. Grape seed extract can do wonders in taking off years from the face.

That is not all. Grape seed extract can add elasticity to the skin by improving the quality of collagen in it. Collagen is vital in maintaining healthy and younger looking skin that is free of fine lines and wrinkles.

Grape seed oil also has anti-fungal, anti-bacterial and anti-septic properties. So when this is present in a beauty product, it not only helps the skin in reverse aging, but also makes sure that the skin is protected against bacteria and other organisms that cause infections and other skin conditions.

Niacinamide

Niacinamide is a chemical form of Niacin (Vitamin B3). Niacinamide also has anti-oxidant properties and works the same way as most of the other ingredients mentioned here.

However, one property that is exclusive to niacinamide is its ability to help the skin retain water. So if you are drinking ample water in your attempts to reverse aging, having niacinamide in your skin care routine will help the skin retain all that water, keeping it hydrated and elastic.

CHAPTER 8

ANTI-AGING SUPPLEMENTS



Chapter 8

Anti-Aging Supplements

Today, it is possible to find almost any form of supplements, be it enzymes, hormones, vitamins or minerals. Supplements for various health and beauty purposes are readily available, and so are those that aid in reducing the signs of aging.



While it is always better to opt for natural methods through improving diet, supplements can speed up the journey to looking more youthful. Supplements, when taken with care and precaution can be very beneficial in attaining numerous health benefits. Some of the more well-known supplements available for aging issues include the following options:

Melatonin

Melatonin, also called the 'sleep hormone' is a hormone produced by the body to regulate the sleep cycle. However, it has now been determined to have age reversing properties too. It is said to act on a cellular level, working on DNA to guard it against disease and illnesses that come with age. It helps in protecting various body organs like the heart and also helps delay the onset of various diseases like diabetes mellitus.

The basic property that makes it effective for reverse aging is that it scavenges free radicals from the body and prevents them from harming healthy cells in the body tissues. As the body gets more prone to disease and mutation with age, the chances of free radicals exerting harmful effects also increases.

Melatonin supplements can help reduce this probability.

Testosterone

Testosterone is a steroid hormone produced by the body in both males and females. In females it is produced in negligible amounts, whereas in males, it is produced in much greater amounts. This is necessary for the development of their secondary sexual characteristics.

For men, testosterone supplements can help a lot with reverse aging. It affects their overall wellbeing and its increased levels, same as those in their youth and helps keep them younger. It keeps their energy level and sex drive high, and also increases muscle mass.

Estrogen and Progesterone

Estrogen and progesterone are female steroid hormones. They are also produced by the male body, but in negligible amounts. All women start feeling the effects well before their menopause, be it hot flashes or mood swings. Even the very thought of their approaching menopausal period is enough for women to genuinely get depressed that they are aging.

Estrogen and progesterone can help with specific aging issues. These hormones help women maintain their sexual drive,

physical and mental wellbeing and an overall youthful appearance.

Various plants and herbs have very high contents of estrogen. When these are incorporated in diet, they can have age defying effects. However, estrogen supplements are also easily available and are completely safe, given they are not taken excessively.

Fish Oil Capsules

Fish oils are the best source of omega-3 and omega-6 fatty acids. These have natural anti-inflammatory properties that play a vital role in any anti-aging regime.

These omegas help the body in regulating its various functions, including blood pressure, maintenance of body temperature and proper functioning of the heart.

Omega fatty acids essentially help keep the heart young by ensuring that it is strong enough to function properly and prevent the clotting of blood under normal circumstances. In fact, fish oil supplements are also advised by physicians to heart patients, for prevention of any further cardiac problems.

But the benefits don't stop here. Fish oils also have a significant anti-aging impact on the brain. They prevent the development of brain diseases and also help the brain maintain its thinking abilities, which normally reduces with growing age. Fish oils have also been found to protect against dementia and other memory related disorders.

Fish oil capsules can take off years from your face too. They help healthy skin cells live longer and reduce the probability of damage to these cells, keeping the skin vibrant and youthful.

Alpha Lipoic Acid

Alpha lipoic acid supplements can be very helpful when you want to stop the signs of aging. Alpha lipoic acid also has anti-oxidant properties that find and destroy free radicals in the body. The anti-oxidant property of alpha lipoic acid is more potent than of other supplements because it destroys free radicals from any part of the body.

Alpha lipoic acid can cross the blood brain barrier, exerting its effects on the brain and protecting against age related diseases like dementia. Another effect that makes it ideal for reverse aging is that it lengthens telomeres.

Telomeres are parts on DNA strands directly responsible for cellular aging. They acts as protective caps at the end of each strand without which the strands would become damaged and the cells no longer able to do their job properly.

Telomeres have the tendency to shorten as an individual ages. Eventually they may become too short to do their job properly and cause the cells to age. So, essentially longer telomeres are markers of healthy cells while shorter ones are connected to premature cellular aging.

By supplementing with alpha lipoic acid, you can ensure that your telomeres stay in optimal health and delay the onset of premature aging.

Resveratrol

Resveratrol is a compound naturally found in grapes and nuts. Its age reversing properties are not limited to just skin alone but may help keep age related disorders at bay as well.

The primary mechanism by which resveratrol does this is by acting on a group of enzymes called sirtuins. Sirtuins are enzymes that affect various metabolic pathways of the human

body that are involved in the aging process. Research has shown resveratrol stimulating these proteins directly, increasing mitochondrial activity which results in producing energy within the cells. This, in turn can have the effect of extending cellular life.

Also, being a naturally occurring type of antibiotic, resveratrol can work to cleanse the body of pollutants and other contaminants. Among other things, this action is also beneficial for keeping the skin healthier, fresher, and youthful. The same can also prevent future wrinkles and reduce the appearance of existing ones.

Hyaluronic Acid

Hyaluronic acid is a naturally occurring substance found in the skin that keeps the skin looking young and makes it glow. It works primarily by helping the skin retain moisture and stay well hydrated. This ensures that all the extra water you are drinking to keep your skin healthy, stays within the skin.

With age, the skin automatically loses its ability to retain water, losing hydration and elasticity. This increases wrinkles and fine

lines on the face. Hyaluronic acid slows down this process to a great degree, keeping the skin firm and supple.

Collagen

There are supplements available with collagen itself. But there also questions whether ingesting collagen is any use at all- research shows that it is.

Collagen is a complex protein that is naturally produced by the body and consists of 19 amino acids. Collagen has different types, but the one found in the skin is type 1. Collagen makes the skin stronger and thicker, making it less prone to damage and disease. It helps keep the skin hydrated and reduces wrinkles, freckles and scars.

Glucosamine

Glucosamine is a substance that keeps the connective tissues of the body strong and healthy. Supplements containing glucosamine are effective for anti-aging too. It helps in the regeneration of skin cells so that old and worn out cells, that give

the skin a dull appearance are replaced by new cells, for vibrant and younger skin.

This cell renewal process helps in replacing wrinkly and dull skin with even skin that has much fewer wrinkles. It helps in the exfoliation of skin and can even reverse wrinkles and fine lines already present on the face.

Carnosine

Carnosine supplements are very effective in anti-aging. Carnosine itself is a compound that inhibits the breakdown of proteins in the skin. This includes collagen and other proteins that are essential for the vitality of the skin. It reduces the chances of premature aging.

It is one of the anti-oxidants that fights free radicals and prevents them from damaging the skin.

So to conclude, it is important that you maintain smart dietary and lifestyle habits to achieve successful reverse aging. Just remember that it is the biological clock we are trying to manipulate and not the chronological one.

So taking things one at a time, make small changes that will help you improve your overall health, while also reclaiming your youth and vitality.