



IN2GREAT
FITNESS & WELLNESS

Cellulite, Sagging & Wrinkles



Cellulite, Sagging & Wrinkles

Introduction	.....2
The F word - Fascia	.....3
Fascia Dictates your posture	.....4
Hydration is Vital	.....5
Remodelling Collagen	.....6
Crap Collagen Culprits	.....7
Solutions	.....8
Key Fascial Health Releases	.....9
Key Facial Fascial Releases	.....10
Vibration Training	.....11
End	.....12

Cellulite, Sagging & Wrinkles

While this ebook has a superficial title about many of the things we dislike about our bodies, our aim is to present you with a case for health, and illustrate how these conditions occur from a breakdown in wellness. Many people assume that the above symptoms occur due to aging or genetics, and that there really isn't much we can do about them, other than rub some lotion onto our skin and hope for the best. You will be pleasantly surprised to hear that there is much you can do to improve the integrity of your skin, and it doesn't involve surgery or botox!

Sure our genes may predispose us to certain conditions, but science tells us that genes are merely the loaded gun, and that we pull the trigger with the choices we make, our lifestyle and environment. If you are after healthy skin, with an important bonus of vitality and longevity, then it's vital that you address the root cause of many of these problems, rather than just rubbing expensive creams on the symptoms.

We are obsessed with aesthetics, so much so that many people go to great lengths to enhance their looks. Some people get regular facials and treatments, while others take more extreme measures like plastic surgery. We can get laser, microdermabrasion, suction, light therapy, chemical peels, and high tech (and very expensive) creams, but no one seems to be addressing the foundation of the skin that creates all of these 'unsightly' problems.

The skin is the biggest organ in the body and gives us vast stimulation and information from the world around us. Your skin says a lot about what is happening internally for your health. Glowing skin, indicates glowing health. Dry, dehydrated and grey skin, or acne, that ages prematurely, tells us that the internal systems are struggling. Whether that's foundational and structural or chemical or metabolic, unless we treat the underlying condition, it will be hard to create lasting change to the skin.



It's not cellulite, it's my bodies way of saying 'I'm sexy' in braille

The F word

Fascia is well known in manual therapy and movement circles, but it is little known and appreciated (yet) for its role in healthy looking skin. If you want great skin free of cellulite and wrinkles, pain free movement and gains in overall wellness, optimising your fascial health should be a priority.

As an interconnected system, fascia has widespread properties in fostering vitality. It's the most ubiquitous material in the body, and its fibrous web-like structure holds us together. It spans from toes to nose under the skin, it weaves through muscles and joints, and encases organs. Fascia communicates with our nervous system 9-10 times more powerfully than muscles, making it crucial for navigating our environment.

If we allow our connective tissue to become glued up (stuck and dehydrated) and thus disconnected to the rest of the body, then we dramatically decrease our strength, and our overall wellness. Glued up tissue causes restricted movement, poor posture, pain, digestive disorders, dehydration, headaches, and weight gain.

Fascia has 4 properties

1. **Viscosity:** Healthy fascia has a viscosity like snot (see the watery web picture below). As fascia degrades, it's viscosity can change from a running fluids or gel, to sticky honey, to glue, to dehydrated strands. Wrinkles, sags and cellulite are all degraded, dehydrated fascia.
2. **Elasticity:** Our connective tissue and our skin have elastic property due to the Elastin and Collagen it's made from. The elasticity is dependant on the load or movements we put through our tissue, as well as the hydration. Healthy, elastic skin is hydrated and can be pulled in all directions, and spring back.
3. **Plasticity:** Our fascial tissue can plastically deform to an extent, and return to it's natural state. You can pinch the skin on the back of the hand, and it will return to normal when you let go. As we age, or as our health suffers, we lose plasticity.
4. **Remodelling:** Lastly our fascial tissue responds to mechanical stress and we can change it. Fascia is constantly adjusting and remodelling itself based on the stressed we impose on it. If we continually hunch over, our fascia lays stronger tissue on the back of our neck to help hold us up.

Look at the texture of the skin in the left picture and the fascia on the right. Both have lines running in multiple directions and layers, allowing it to move and stretch in multiple directions. Both are a web like, mesh structure ready to absorb, protect, react and move. Hence the most vital ingredient in healthy skin, is whole body training with varying angles, speeds and loads.

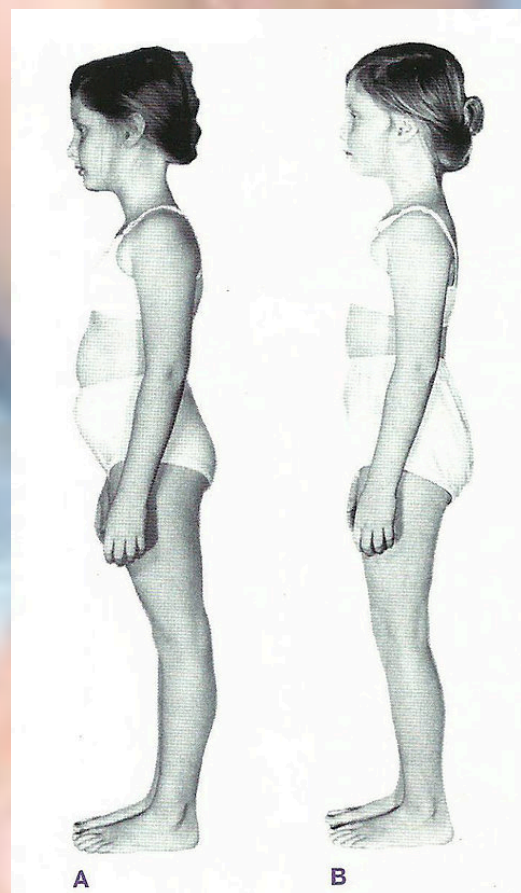


Fascia dictates your posture

So now that we appreciate that fascia forms the underlying, multi-layer structure under the skin, throughout muscles, tendons, organs and cells, we can now look at how fascia can change our global structure. When fascia gets stuck it changes our posture.

Key examples as it relates to unwanted body conditions

- **Jowls** - Tight and stuck tissue at the front and sides of the neck, pulling the jaw forward and down to create sagging skin.
- **Double Chin** – Often occurs from a forward head posture that has resulted from too much time bent forward.
- **Smaller Chest** – from a rib cage that is curling down and forwards to a hunched position, making the breasts look saggy or smaller than a more open chest position and upright posture.
- **Hanging Belly** – A pelvis that tips forward causes the belly hang out and appear visibly fatter. See the picture on the right
- **Saggy Bum muscles** – A pelvis that tips backwards or with feet that point outward often makes the bum muscles appear tucked in and saggy, rather than full and rounded.
- **Fatty deposits over the knees** can occur from a locked out leg position where the front of the body becomes shortens, and we hang off the back of the legs. (as per picture)
- **Thigh Gap** – The illusive thigh gap often goes missing when thighs touch due to pelvic or femur alignment. Tension on the inside and outside of the leg and foot, can draw the knees to touch, making legs look less long and lean.



Good posture is not about strengthening weak areas, or loosening tight areas, it's about enhancing the structure from the ground up, so that our body can support itself. This means increasing fascial health, and moving intelligently with the aim to change the forces put through the body so it can make positive adaptations.

This picture demonstrates some dramatic changes in a young girl that have occurred simply by addressing tension relationships in her fascia. This before and after picture is dramatic, and can't be attributed to her simply standing taller, strengthening her 'weak' muscles, or sucking in her belly.

In picture A the girl looks overweight, and hunched and hanging off her back fascial tissue to hold her upright. Picture B shows a more harmonious balance between two of the major fascial lines running along the front and back of the body. Here the girl looks taller, leaner, and physically more balanced.

Fascia can make you look fatter, saggier & shorter!

Fascial layers are designed to slide and glide against each other to facilitate movement and sense the environment. Veins, arteries, lymphatic ducts and nerves run through our rich fascial network. When we lose the slide and glide, we suffer decreases blood flow, lymphatic waste removal and even decreased neurological function! If circulation, hydration, and lymphatic removal are decreased, waste products build up, repair is slower, and nutrients and hydration can't effectively reach target tissue for healthy skin!

Hydration is a vital

Dehydrated fascia is less resilient, sensitive and elastic (more saggy!) and a common cause of injuries and dull, wrinkled skin. It's a misconception that when we perform massage or fascial release with a foam roller, we are breaking up 'knots'. More correctly, we are using heat and friction to hydrate 'stuck' segments, enabling them to move more efficiently. Drinking water isn't enough, fascia needs movement to hydrate. As we move or massage an area, we draw fluid in, and allow waste products out.



The skin and fascia are like a sponge. When we squeeze and move, water is pushed in or out. If tension is held long term, then new water can't get through, and dirty old water can't get out of the sponge. For spongy, lush skin, we need hydration *PLUS* movement.

Fascial hydration strategies might include massage, skin brushing, foam rolling, mobilisers or low intensity, whole body movements throughout the day to pump fluid around the body.

Fascial and skin need hydration, but so do our cells. The mitochondria (energy factories) in our cells need water to make energy. If we are dehydrated energy production is compromised, and so too is cellular health, predisposing us to higher levels of oxidative stress, which is the equivalent to rust inside our cells. Drinking good quality, filtered water spiced with mineral salts helps hydrate cells. Movement shakes and charges the water in our body and helps push it into cells to use for energy.

When we get a facial the skin looks plump and rosy, not from the products the therapist used, but from the continual movement and massage which draws blood flow and circulation to the face to help 'puff up' dehydrated skin and fascia. The skin is massaged and squeezed in all angles, and so fluid is drawn into the tissue like a sponge, and waste products are pushed out.

Wrinkles form under repeated stress.

Repetition is the enemy of fascia. Chronic pain and non-acute injuries frequently result from training the same way repeatedly, causing imbalances. When we repeat the same activity, our body seeks to strengthen the area by depositing thicker fascia. As fascia gets thicker, it becomes more stuck.

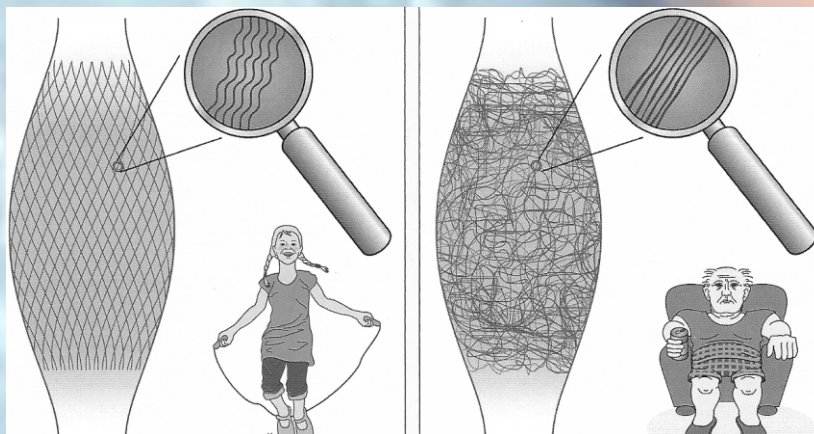
You'll feel this in the thickened fascia developing where your bra strap constantly sits, or the chaotically laid tissue under our hamstrings because we sit too often, or in the way it's easier to cross one leg over the other because we do it more often.

Wrinkles are formed from repetitive movements or facial expressions. If you have 'crow's feet' eye wrinkles, you can feel where fascia has clumped together to reinforce areas that are repeatedly stressed when you smile. To change this, rub the area in all different directions, specifically across the direction of the wrinkle lines, and you will feel the fascia hydrate and melt, as it becomes more elastic. The more you do this, the finer the lines become as you build more hydrated skin and collagen that responds to a variety of angles, not just laughter lines!

Remodelling

Fascia has the ability to remodel itself in response to stress. Approximately 50% of the collagen fibrils are replaced in a healthy body every year. If you take a look at the below picture, you can see that the fascia of younger people is typically more organised and 'crimped' and older and sedentary people tend to have more chaotically organised fascia. Fascial fitness drills, and multi directional, intelligent loading helps to improve the 'crimp' to create more youthful tissue. Lack of proper loading creates chaotically laid tissue.

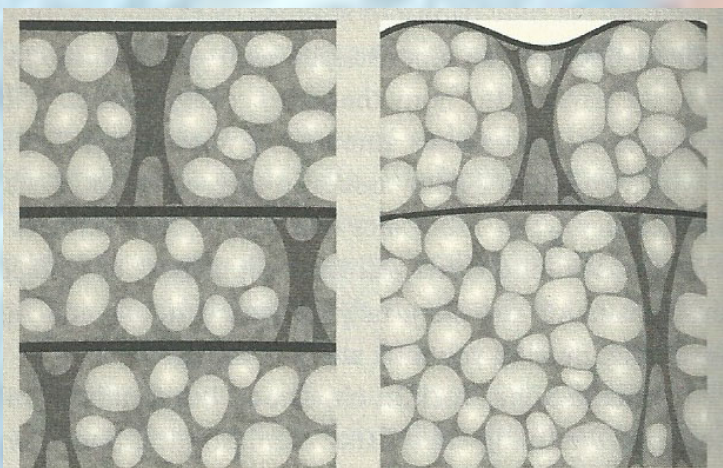
So what does this mean for skin training? Well it means that change is more than possible, it's probable but will take some work given that fascia turns over less frequently than other parts of the body. That's why fascial training can get ***immediate changes in terms of hydration and movement improvement***, but fascial ***structure takes longer and needs consistent loading efforts*** to facilitate change. In general muscles and the nervous system recover in around 48 hours, but after a tough fascial based session, recovery can be up to 72 hours, and structural change can take months. It won't happen overnight, but it will happen!



Picture courtesy of Castle body work

Cellulite Fat Lacks Collagen Support

When collagen breaks down, which can happen for many reasons as you will see in the coming pages, cellulite is just one of the symptoms. The fat underneath our skin is made from individual fat cells which are supported by 3 layers of collagen fibers (as per the picture.) When cellulite occurs, it's because the collagen fibre support has broken down to only have 2 layers, which means for a stippled surface that is less held in by fascia. While you may not be able to re-grow the lost layer, you certainly can prevent further breakdown, and train the skin support structure to function better to reduce cellulite.



Picture courtesy of Deep Nutrition by Cate Shanahan

When collagen suffers, wrinkles to become more prominent, skin sags, and fat deposits to poke through and create cellulite.

Not to mention decreased energy, mobility and increased pain, stiffness.

Crap Collagen Culprits

You are what you eat

Your nutrition will make or break your fascia and cellular health. Fascia and skin are made predominantly of cells, water, collagen fibres and ground substances. All connective tissue in the body is made from these 4 substances in varying quantities.

A basic prerequisite for healthy fascia, is eating quality protein. Collagen is the most abundant protein in the human body. Foods like bone broth, grass fed organic meats, or collagen supplements, will help increase the integrity of the fascial system by supplying you with the building blocks for collagen, the dominant compound in fascia.

Every single cell in the body is made of lipid fats, and failing to eat nutritious fats will result in cell walls that lack integrity and efficiency. Good fat sources are butter, coconut oil, avocados, nuts, grass fed pasture raised animals, nuts and seeds, wild caught cold water fish etc.

Sugar, vegetable oils, inflammation, toxins and lack of movement degrade the collagen support structure. A diet high in processed industrial vegetable /nut /seed oils (like soy, canola, rice bran oil) and sugar, literally degrades our fascial tissue, and pulls cell membranes apart. When cellular health suffers, increased oxidation occurs, meaning our body starts to rust from the inside out.

After touching and working on bodies all day long, we can feel the difference in quality of tissue and skin in those who have good nutrition, versus those who don't. Destroyed fascial tissue feels lumpy, too hard and stuck, and skin looks grey, dehydrated, and less elastic.

Toxins love to bind themselves to collagen.

When this happens, the structure of the collagen in your body is changed, and your body sees it as a foreign invader. This results in your immune system attacking its own collagen tissue, and launching further inflammatory processes. Toxins in the body can be anything from xenoestrogens, chemicals, bacterial toxins, heavy metals etc. Detoxification is enhanced with a diet high in organic vegetables, fats and proteins. Many people need extra detoxification support with supplementation.

Gut Health

Poor gut health can result in inflamed, ruddy, red skin, rashes, itchiness, dry skin, acne, and accelerated aging of skin. Our gut health is of utmost importance for systemic health, and one symptom of poor gut health, is poor skin. Food intolerances, leaky gut, autoimmune conditions, parasites or pathogens can all interfere with our ability to digest and absorb what we eat, and lead to unhealthy skin and fascia.

Stress

If our stress response is ignited too often, our connective tissue becomes dehydrated, our hormones shift out of balance and we can suffer decreased resilience and oxidative damage. Stress is catabolic, meaning it breaks down our body! Stress accelerates the aging process of the skin and fascia, decreasing its health.

Sitting & Sedentary Lifestyles

A lack of healthy movement means that our circulation and lymphatics slow down. We need movement for healthy function in all aspects of our physiology, but prolonged sitting in particular squashes the inner thighs and hamstrings together, squeezing all the water out of the tissue, leading to chaotically laid fascial tissue that is dehydrated and stuck, paving the way for cellulite.

Body Fat

Excess body fat changes how our body holds itself, particularly when that fat is stored around the belly or hips. Extra body fat leads to extra inflammation, decreased cellular and fascial health and cellulite!

Solutions!

Movement Solutions

Train with whole body movements to form stronger, longer collagen supports in your fascia. Think of ways to spice up the way you train by changing angles, grips, foot position etc. Remember repetition is the enemy of your fascia, and variety will create resilient supple skin and a strong support structure.

Aim to train variable with movements in all of the quadrants on the picture to the right. This means some loaded activities, some unloaded. Some movement based, and some 'linear' or traditional training based movements. Think of areas you want to change, and as many ways as possible to load them variably!

LOADED LINEAR TRAINING

Examples:
Bench press, deadlift, clean and press, bicep curl, Leg press, lat pull down, Weighted lunges, Calf Raise



LOADED MOVEMENT TRAINING

Examples:
ViPR, Sandbells, TRX Rip Trainer, Warding Patterns, Powerplate, Dynamic weights, Functional Training



UNLOADED LINEAR TRAINING

Examples:
Skill development, TRX, Running, Cycling, Yoga, Swimming, Activations / Rehab, Pushups, Pilates.



UNLOADED MOVEMENT TRAINING

Examples:
Speed Agility Quickness, Play / games, Tai chi, Ground to standing, Movement prep, Martial arts, Team Sports.



Red LED light

Red LED has abundant research behind it for its ability to stimulate new collagen growth. It's becoming more available in beauty clinics, and is a cheap, and effective technique for improving collagen health, as well as reducing pain and inflammation.

Massage is always a winner

Get your skin and superficial tissue moving in ALL directions. Deep tissue massage is often not ideal for changing fascia, it's more often just pinning the layers together, rather than increasing the slide and glide of multiple layers. So aim for superficial massage that drags the skin subtly in all directions.

Key Fascial Health Releases



Hamstrings hydration

Place the back of the leg across the roller and drag the tissue sideways (as per the arrow) across the leg so that the entire fascial sock around the thigh is pulled in different directions. Start under the knee and work your way up to the pelvis.



Adductors hydration

Place the roller between the thighs and walk in a Pidgeon toed stand to create a shear tension on the inner thigh tissue. Make sure the knees are slightly bent for best effect, and keep moving the roller up and down to change the entire length of the thigh. It's usually most tender around the knee.



Outer Hip

Place the hip on the roller drag the tissue sideways (as per the arrow) across the hip forward and back. Aim to find the bony sections (ridges of the hip) where it's most stuck.



Chinese burn / dragging

Give yourself a 'Chinese burn' type grip and massage the tissue in different directions on bare skin. You will feel which directions struggle to move, and keep pushing that way. Imagine you are trying to drag the skin and twist it around your thigh gently.

Key Facial Fascial Releases

These releases can be done on bare skin, or with massage wax or coconut oil. In general explore areas that feel 'stuck' and try to move them in all different directions, practically the way they are resistant to move.



Crows feet

Drag across the directions of the lines, create small circles, and generally drag the tissue of the face in all different directions to hydrate the areas where the lines have formed.



Forehead

Drag across the directions of the lines, create small circles, and generally drag the tissue of the face in all different directions to hydrate the areas where the lines have formed.



Jowls

Drag the tissue of the neck backwards up behind the ears. This release can begin under the chin, or on the front of the neck, and in general most people need this area lifted, and pulled backwards. The aim is light skin movement, nothing painful.

Vibration Training and Release - Powerplate

Vibration training is a fantastic way to rapidly hydrate fascial, skin and cells, and accelerate the removal of waste products. We call it a 'flush' meaning you lay on the platform with the objective of flushing the tissue. It's great for hydrating areas that don't get enough movement, circulation and stimulation.

The Powerplate vibrates in 3 dimensions to create variable force through this tissue. We commonly use 50 Hertz, at low amplitude, which is a speed faster than the muscles can contract, thus enhancing lymphatic drainage, circulation and fascial hydration. In other words, it upregulates the nutrients in, and helps pull the waste out!



Aside from directly laying on the vibrational platform, additionally it is great at putting load through the body while in a stationary position. Standing upon the platform creates up to 40 muscle contractions per second, and 8 G-force of load in all planes of motion, powerfully helping train the body to work as an interconnected system the way it was designed.

Powerplate have several studies indicating the benefits of vibration training for cellulite reduction. Vibration remaining is a winning combination for hydrated, soft skin, as well as efficiently loading the body with extremely high volume raining.

Other Key Benefits:

- Increased bone density & muscle strength
- Weight loss
- Stress hormone reduction
- Increased growth hormone and testosterone
- Enhanced digestion
- Pain reduction & tissue hydration
- Increased flexibility & mobility
- Faster recovery
- Reduced swelling



The key to elastic, high functioning skin is a **VARIETY** of movement strategies, that **HYDRATE** and **PUMP** fluids through the system, coupled with **QUALITY NUTRITION** to support healthy tissue.

Fascial Fitness may seem like an odd topic, but we promise it's a rapidly growing field with huge potential in anti-aging healthcare. Looking after your fascia will make your skin glow, help you stand taller, move better, and feel more vibrant! Thanks for reading, please feel free to reach out to us for more specific help on your unique situation.

Priscilla & Nathan Flynn

www.in2greatfitness.com.au

info@in2greatfitness.com.au

