

Chapter 6

THE SKIN SOLUTION

Brain Signals to Soothe and Smooth Your Skin

The health of your skin is an outside reflection of the health of your brain.

On a rare, sunny, glorious, fall day in Seattle, my friend Cynthia, whom I had known for the past 12 years, greeted me at the front entrance of the lecture hall. Cynthia was the founder of ADD Resources, a support group for people and families affected by attention deficit disorder. I had spoken for her group many times. Cynthia, who also has ADD herself, is famous for saying exactly what is on her mind. You always know what Cynthia is thinking. As I hugged her hello, she said, “I have to know what you are taking. Your skin is beautiful.”

I blushed. “Fish oil and sleep,” I said.

“That’s it,” she said.

“That is a big part of it,” I replied. “Plus, I eat a brain-healthy diet, exercise, don’t believe every stupid thought that comes in to my head, and deal with the stress in my life without caffeine or alcohol.”

The health of your skin is directly tied to the health of your brain. People, especially women, spend so much time and money working on their skin, when the first organ you want to take care of to have great-looking skin is your brain. The cosmetics counter, the dermatologist, the plastic surgeon — this is where you run when you want to reverse the aging process. But skin-care products, laser treatments, and the scalpel are often only temporary fixes. The real fix

lies in your brain. It is your brain that tells your skin to produce more or less oil. It is your brain that supervises the production of supportive collagen. And it is your brain at the command post of skin cell regeneration. We all need to stop thinking about skin care from the outside in and start thinking about it from the inside out.

While writing this book I went to my father's 80th birthday party. Two of my childhood friends were at the party. One friend was a long-time smoker. As we stood next to each other, I could see that his skin was deeply wrinkled. Smoking constricts blood flow to your brain and skin and prematurely ages both. As I wrote in the Introduction, my other friend had lost his wife to cancer a year earlier. The chronic stress aged him what looked like twenty years. I worried his brain would look aged as well as he complained about his energy and memory.

I have often said that whatever is good for your heart is good for your brain, and whatever is bad for your heart is bad for your brain. It is all about healthy blood flow. Here we can definitely add that whatever is good for your heart is good for your brain is good for your skin, and whatever is bad for your heart is bad for your brain is bad for your skin. The same things that boost blood flow to the brain and enhance overall brain function will rejuvenate your skin and give it a healthy glow. By the same token, many things that harm the brain also damage your skin and make you look older.

ACTION STEP
*Boost blood flow to
rejuvenate your skin.*

THE BRAIN-SKIN CONNECTION

You might wonder what your brain has to do with your skin. After all, your skin is on the outside of your body, right? Isn't it more affected by our environment and the things we put on our faces — creams, lotions, makeup, aftershave, wrinkle removers — than our brains? No.

Scientific evidence points to a powerful brain-skin connection. Your skin and brain are completely connected to each other. It is not uncommon to hear:

“He is so mad that he is turning red.”

“You can tell she is embarrassed because she is blushing.”

“Whenever I get upset, I break out in hives.”

“I am so excited I have goose bumps.”

“He must be the nervous type because his hands are cold.”

“Whenever I get nervous, my hands start to sweat.”

I remember the first time I was on television. It was on a small station in Connecticut about twenty years ago. I was so nervous that I unconsciously spent the whole interview rubbing my hands on my trousers trying to keep them dry. When I watched the video later, I was horrified.

Scientists measure both hand temperature and skin sweat gland activity to understand the body’s response to stress. Lie detector tests use these two measures as part of their battery to determine when people lie. As a biofeedback therapist, I have spent many hours teaching my patients to both warm and dry their hands as part of relaxation protocols. When we feel anxious or upset, our skin temperature immediately starts to become colder and we start to sweat.

ACTION STEP

Counteracting responses to stress helps you feel calm and relaxed, and makes your skin look healthier.

UNRESOLVED EMOTIONS MAY COME OUT THROUGH YOUR SKIN

When I was a resident at the Walter Reed Army Medical Center in Washington, DC, one

of my first psychotherapy cases was a U.S. Army Colonel named Bob who had a persistent rash over his whole body that was resistant to treatment. Bob was referred to our clinic because the rash started shortly after his wife had died in a car accident two years earlier. He had no idea why he needed to see a shrink but was happy to cooperate if it could help. The rash was interfering with everything in his life. Plus, he noticed that whenever he became stressed, the rash would intensify.

One of the unique features of his story was that Bob never cried over the loss of his wife. He told me he had always had problems expressing his feelings, and he had four children at home who needed him now more than ever. After several sessions, I decided to use hypnosis with Bob to help him with what I believed to be unresolved grief. Bob was highly hypnotizable, which is often true of many intelligent people. During our first hypnotic session, Bob cried for the first time. The tears started silently, almost reluctantly, then the sobs came, which became more intense as the session progressed. The next four hypnotic sessions were filled with tears and the expression of grief over his lost love and best friend. He had been so overwhelmed by having to take care of his children and his job that his unconscious mind did not allow him to grieve, fearful he would lose total control. In a safe place, he allowed himself to feel the pain. Over the next three months, his rash went away.

YOUR SKIN IS “THE BRAIN ON THE OUTSIDE”

Change your brain, change your skin. Numerous studies have shown that when you experience psychological stress, your brain responds by sending signals to your skin to react as if it is under physical attack. This can result in a rash, flushing,

ACTION STEP

Don't bottle up your emotions or it might cause skin problems.

blushing, or an increase in the production of protective oils and a decrease in the skin's less-critical functions, such as hair growth. More oil and less hair growth typically equals more blemishes and thinning hair. If you are stressed out about your new job, a test, or a big date, your skin is more likely to break out.

More evidence of the brain-skin link comes from research out of Sweden where researchers have found that it is possible to study the biological roots of mental health diseases like bipolar disorder and schizophrenia by looking at certain skin cells rather than having to take tissue samples of the brain. That's because certain skin cells function similarly to the brain cells that are believed to be involved in these disorders. In a sense, this study shows that your skin cells mirror your brain cells.

On the flip side of the brain-skin connection, your skin can change your brain. In 2008, Wake Forest University's Gil Yosipovitch and colleagues published findings from a very interesting study using brain scans to see how scratching affects the brain. The researchers studied what happened when thirteen healthy adults had their lower right leg gently scratched although the area didn't itch. Participants were scanned before, during, and after the scratching sessions using functional MRI imaging. The scans showed that scratching activated certain areas of the brain, including the prefrontal cortex, inferior parietal lobe, and cerebellum. At the same time, it deactivated the anterior and posterior cingulate cortices. These areas are associated with unpleasant emotions and memories. This means that the simple act of scratching your skin changes your brain and can make you feel better. You might also want to try this with your partner or children to soothe them when they are upset.

The brain-skin connection is so strong that some people have begun calling the skin "the brain on the outside." In fact, the skin has been found to produce many of the same

neuropeptides — including melatonin, serotonin, cortisol — used by the brain. It is clear that the health and appearance of your skin are a reflection of the health of your brain.

BAD BRAIN HABITS AND CONDITIONS THAT CAN CAUSE SKIN PROBLEMS AND PREMATURE AGING

When you look in the mirror, what do you see? If it is a face full of wrinkles, fine lines, or sagging, don't run to the plastic surgeon just yet. Take a look at these common brain causes of premature aging first. The same goes for those of you with blemishes and acne. Before you rush to the cosmetics counter for a bunch of pricy acne treatments, take a moment to think about what is going on inside your body and your brain and how your lifestyle and environment are affecting both your skin and brain. In many cases, by taking care of your brain, you will be able to improve the appearance of your skin.

Caffeine: Too much caffeine from coffee, tea, chocolate, or some herbal preparations dehydrates your skin, which makes it look dry and wrinkled.

Alcohol: Alcohol has a dehydrating effect on the body, sapping moisture from your skin and increasing wrinkles. It also dilates the blood vessels and capillaries in your skin. With excessive drinking, the blood vessels lose their tone and become permanently dilated, giving your face a flush that will not go away. Alcohol also depletes vitamin A, an important antioxidant involved in skin cell regeneration. Alcohol abuse damages the liver and reduces its ability to remove toxins from the body, resulting in increased toxins in the body and skin that make you look older than you really are.

Smoking: Nicotine reduces blood flow to the skin, robbing it of that healthy, rosy glow. It also destroys elasticity, which promotes wrinkles. The act of puffing on cigarettes also adds fine lines

to the area above your upper lip. Smoking for ten or more years can give you “smoker’s face.” That’s a term Dr. Douglas Model introduced in 1985 when he published a study in the *British Medical Journal* showing that he could identify long-term smokers by doing nothing more than looking at their facial features. The “smoker’s face” made the people look older than their true age and included the following characteristics: lines above and below the lips, at the corners of the eyes, on the cheeks, or on the jaw; a gaunt appearance; a grayish tone; and a reddish complexion. More bad news: smokers are three times as likely to develop a certain type of skin cancer called squamous cell carcinoma than nonsmokers, according to a study in the *Journal of Clinical Oncology*.

Poor diet: The foods you eat fuel the regeneration of your skin cells, which make themselves new every thirty days. Your skin reflects the nutritional quality of your diet. If you eat a diet deficient in omega-3 fatty acids, you are more likely to look older than your age.

Too much sugar: Eating too many sweets and high-glycemic foods can cause wrinkles. A study in the *British Journal of Dermatology* found that consuming sugar promotes a natural process called glycation, in which sugars attach themselves to proteins to form harmful molecules called advanced glycation end products (AGEs). AGEs damage your brain and also damage collagen and elastin, the protein fibers that help keep skin firm and supple. The more sugar you consume, the more damage to these proteins, and the more wrinkles on your face.

Yo-yo dieting and massive weight loss: Every time you gain weight, your skin stretches to accommodate the increased girth. When you lose weight, your skin has to contract back to your new smaller shape. A lifetime of ups and downs in weight diminishes your skin’s elasticity until it can no longer shrink to fit your size. Gaining a lot of weight — 100 pounds or more — can

stretch your skin to the point of no return. After massive weight loss, you may be stuck with loose, hanging skin on your body and face.

Inadequate water intake: When you don't drink enough water, your skin becomes dehydrated.

Lack of sleep: Without adequate rest, your skin misses out on the ever-so-important rejuvenation process that occurs during sleep. The result? Premature aging of the skin, bags under the eyes, and an increase in wrinkles.

Lack of exercise: Being a couch potato decreases blood flow to the skin and deprives you of the anti-aging benefits of physical activity.

Stress: Researchers have pinpointed a strong brain-stress-skin connection. In response to stress, your brain sends signals to your skin that can result in pimples and breakouts during stressful times. Scientific evidence has found that psychological stress worsens the symptoms of several common skin diseases, such as psoriasis and eczema.

Unresolved emotional conflicts or posttraumatic stress

disorder: As in Colonel Bob's case above, unresolved grief or emotional conflicts cause chronic stress and may be reflected in your skin. If you emotionally repress or bury your problems they may be reflected negatively through your skin. Get help when you need it.

Hormonal changes: The hormonal fluctuations that occur during puberty, pregnancy, PMS, perimenopause, menopause, polycystic ovarian syndrome (high testosterone levels in some

ACTION STEP

Avoid too much alcohol, too much caffeine, or too little water. They dehydrate the skin and make it look dull and wrinkled.

ACTION STEP

Remember that medical and psychiatric conditions can be the cause of skin problems. Treat the cause rather than just treating the skin symptom.

women), and andropause (low testosterone levels in men) may be at the root of breakouts and other undesirable changes in your skin. Dry skin is commonly associated with hypothyroidism when the thyroid gland is underactive.

Untreated or undertreated psychiatric conditions: Skin picking and cutting are symptoms of certain types of mental disorders.

Dementia and memory problems: With impaired cognitive function, you may not remember to take medications, to wear sunscreen, or to follow a skin-healthy beauty regimen.

Medications: Some prescription and over-the-counter medication can affect your skin in a negative way. For example, birth control pills may either worsen or improve the appearance of acne and oily skin.

Sun exposure: The damaging rays of the sun accelerate the effects of aging and cause age spots, wrinkles, sagging, and in some cases, skin cancer. Scientific studies show that due to our changing climate and ozone depletion, the risk for skin cancer is on the rise. Although most types of skin cancer are treatable, they may leave unsightly scars. Some sun exposure is important to get healthy levels of vitamin D. But balance is important.

Pollution and environmental toxins: Daily exposure to toxins can damage your brain and your complexion. A study published in the *International Journal of Cosmetic Science* found that exposure of the skin to troposphere ozone, the major oxidant in photochemical smog, significantly reduced vitamin E by 70 percent. It also increased lipid hydroperoxides, which are a sign of oxidative damage in cell membranes.

Climate: If you live in a dry, desert area, your skin may look as parched as you feel.

12 BRAIN WAYS TO GET SMOOTHER, YOUNGER-LOOKING SKIN

1. Get more sleep for a better brain and skin that glows.

Skin cell regeneration, in which dead skin cells are replaced with fresh new cells, revs up while you sleep to rejuvenate your skin. Getting adequate sleep is a better anti-aging treatment than anything you could find at the cosmetics counter. Sleep also repairs skin from daily pollution and toxins and helps prevent breakouts by regulating the body's hormones. For more on the importance of sleep, see [Chapter 10](#) The Sleep Solution.

2. De-stress for anti-aging your brain and skin.

By reducing the stress in your life, you can take years off your appearance and delay the skin's aging process. With stress hormones under control, you are likely to experience fewer wrinkles and breakouts. For more information on how stress affects your skin, check out [Chapter 11](#) The Stress Solution.

3. Exercise to improve both brain and skin circulation.

Getting your heart pumping improves blood flow to your brain and skin. Improved cell regeneration, collagen production, and wound-healing are some of the many benefits of enhanced circulation. In [Chapter 5](#) The Exercise Solution, you will find more ways that exercise improves the skin.

4. Balance your hormones for better skin and brain function.

Acne, dry skin, oily skin, wrinkles, sagging — these can all be signs of hormonal imbalances in your body. For example, the hormone estrogen helps delay the aging process to keep your skin looking firm and supple. Estrogen is responsible for collagen crosslinking, in which collagen intertwines with other collagen to form a sort of mesh network that provides elasticity and smoothness and keeps the skin from sagging. It is similar to the way Spandex

works — you can stretch it out, and it will snap back to its original shape. Estrogen levels decrease with age, which causes you to lose the protection of crosslinking. This makes your skin more similar to a delicate wool sweater — if you stretch it out, it stays stretched out and doesn't spring back into shape. This is when gravity starts to take its toll on your face.

By keeping your testosterone and thyroid levels in check, your skin will be softer, smoother, and clearer. See [Chapter 7](#) The Hormone Solution for more on balancing your hormones.

5. Have more sex.

Having great sex — and a lot of it — can boost the levels of hormones, such as estrogen and DHEA, both of which promote smoother, tighter skin. According to fascinating research, making love on a regular basis is so good for your skin, it can make you look ten years younger. More on this intriguing research in [Chapter 14](#) The Passion Solution.

6. Limit caffeine and alcohol.

Avoid any beverages that dehydrate your skin to keep it looking soft and supple.

7. Quit smoking — now!

If you quit smoking, you can reverse some of the damage you've done to your skin.

8. Eat a brain-healthy diet.

A diet full of brain-friendly antioxidants gives you healthier skin and enhances the skin cell regeneration process.

9. Maintain a healthy weight.

By stabilizing your weight, your skin is more likely to maintain its tone and elasticity.

10. Drink more water.

Drinking an adequate amount of water keeps your skin hydrated to prevent wrinkles and fine lines.

11. Balance your sun exposure.

Some sun is essential for healthy skin, to boost vitamin D levels in your body. Too much sun can cause premature aging and age spots. Try to get twenty minutes of good sun exposure during the day, after which, protect yourself with sunscreen.

12. Treat mental disorders and memory problems.

When your brain works better, your skin will likely look better, too. The chronic stress from having depression, anxiety, substance abuse, or attention deficit disorder robs your skin of its vitality and elasticity. Early treatment is essential.

SUPPLEMENTS TO ENHANCE YOUR BRAIN AND YOUR SKIN

See Appendix C The Supplement Solution for more detailed information.

Vitamin D is an essential vitamin for both your brain and skin. I have written about it many times in this book in regards to brain health for mood and memory, but it is also important for your skin.

Fish Oil is another supplement I have written extensively about for the brain and it is often helpful for your skin.

Evening primrose oil contains an essential fatty acid called gamma-linolenic acid (GLA) which has scientific evidence it can help with eczema and rashes.

DMAE, also known as deanol is an analog of the B vitamin choline. DMAE is a precursor of the neurotransmitter of acetylcholine it has strong effects on the central nervous system. DMAE is commonly used to increase the capacity of neurons in the brain and is also

thought to have anti-aging properties that diminish wrinkles and improve the appearance of the skin.

Phenylalanine is an amino acid that has been found to be helpful for depression and pain. It also has good scientific evidence that it may be helpful for vitiligo, a chronic relatively common skin disorder that causes depigmentation in patches of skin. It occurs when the cells responsible for skin pigmentation, die or become unable to function.

Alpha Lipoic Acid (ALA) is made naturally in the body and may protect against cell damage in a variety of conditions. In a number of studies it has also been found to be helpful for skin issues as well.

Grape Seed Extract comes from grape seeds that are waste products of the winery and grape juice industry. Extensive research suggests that grape seed extract is beneficial in many areas of health because of its antioxidant effect to bond with collagen, promoting youthful skin, elasticity, and flexibility.

The Skin Solution

Skin Damagers

Too much caffeine

Alcohol

Smoking

Poor diet

Too much sugar

Yo-yo dieting

Dehydration

Skin Enhancers

Limit caffeine

Freedom from alcohol

No nicotine products

Brain-healthy diet

Reduced sugar intake

Maintain stable weight

Adequate water intake

Lack of sleep	Adequate sleep, at least seven hours per night
Lack of exercise	Physical activity at least four to five days a week
Chronic stress	Meditation, deep-breathing exercises
PTSD	Therapy
Hormonal imbalances	Balanced hormones
Thyroid conditions	Balanced thyroid levels
Psychiatric conditions	Treatment, such as therapy and medication
Memory problems	Brain-healthy habits or treatment, such as medication
Sun exposure	Limit sun exposure to twenty minutes then wear sunscreen
Aging	Supplementation with vitamin D, fish oil, DMAE, phenylalaine, alpha lipoic acid, grape seed