



Aging Well, Aging Healthy...a continuing series

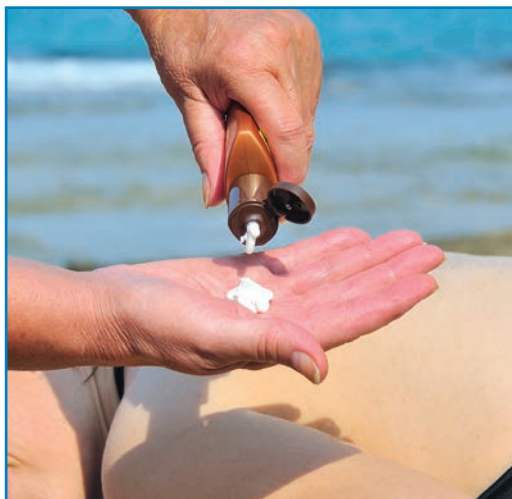
HealthWise presents an ongoing look at research that provides valuable insights to help today's seniors – and the generations set to follow – create a vibrant next chapter. We have looked at strategies to keep the aging brain healthy and to protect the aging senses. In this issue, we get under your skin to learn how to keep it supple and resilient over the years.

Wrinkles. Dry skin. Crow's feet. Undereye circles. Sagging. Is there a way to stave off these very natural signs of aging? The answer is yes...and no. The thickening of the stratum corneum (the outer layer of the epidermis) which causes drier and flakier skin, is inevitable, as is the thinning of the dermis (underneath the epidermis), resulting in loss of elasticity. Genetics plays a pivotal role in determining when this starts to occur. However, there are a number of preventive steps you can take – some well-known and a few unexpected – which may help mature skin keep its youthful glow at 50, 60 and beyond.

Experts advise:

- ◆ **Cut your sun exposure in half, at a minimum.** UV exposure damages elastin and causes a loss of collagen, which results in sagging, fine lines and wrinkles. Think of sunscreen as the only truly magic elixir to improve skin appearance and health, and most importantly, prevent skin cancer...and choose one with SPF 30 or above and broad-spectrum UVA/UVB protection and use daily. In addition, wear a hat and UV-protective clothing outside, and try to avoid being in the sun when UV rays are strongest, between 11 am and 1 pm.
- ◆ **Exercise.** Another benefit to engaging in at least three hours of physical activity weekly is the positive impact on keeping skin younger, with the potential to reverse skin aging even for those who start exercising late in life. New research showed that men and women over age 65 who exercised frequently had skin composition similar to 20 to 40-year-olds, with markedly thinner, healthier stratum corneums and thicker dermis layers. Participants' skin "looked like that of a much younger person, and all they had done differently was exercise." Researchers surmised that myokines, substances created by working muscles, may be responsible for the results, jump starting changes in cells far from the muscles themselves. They also noted that it was

*Sources: American Academy of Dermatology, Mayo Clinic, American Academy of Facial Plastic and Reconstructive Surgery



43% Percentage of people who rarely or never ask someone else to apply sunscreen to their back.*

unlikely that any pill or salve would replicate the skin benefits of a workout.

- ◆ **Take short, lukewarm showers.** Long, hot showers strip your skin of its natural oils.
- ◆ **Protect in winter with a humidifier** to add moisture to the home, and gloves to protect your hands from drying out.
- ◆ **Focus on the right foods and beverages.** Include omega-3 and omega-6 fatty acids in your diet, preferably from natural sources such as olive oil and fish, to help protect your skin's moisture barrier. Cut back on sugars which promote inflammation and can potentially damage normal production of dermal cells. Avoid high glycemic foods such as white bread and pretzels, which may also be responsible for prematurely aging skin. Drink plenty of water, but moderate alcohol intake – red wine can dilate blood vessels and contribute to rosacea, a skin irritation.
- ◆ **Establish a smart night routine.** Remove all makeup and wash your face before bed to eliminate the pollutants that break down your skin's collagen all day. Then apply a retinoid followed by a moisturizer.
- ◆ **Get a good night's sleep.** During the deepest stage of sleep, your body releases growth hormones for cell repair, helping your skin rejuvenate on a daily basis.

Genie in a Bottle?

The search for the fountain of youth in a bottle goes on, but there are a number of products that soothe, hydrate and stimulate, including:

- ◆ **Retinoids**, vitamin-A derivative compounds, have been shown to boost collagen production and cell turnover, unclog pores and stimulate blood vessels. The prescription retinoid cream, tretinoin, is FDA-approved to reduce fine lines and wrinkles. Over-the-counter retinoids are also available.
- ◆ **Alpha hydroxy acids (AHAs)** are used to remove the upper layer of old skin and stimulate the growth of smooth new skin.
- ◆ **Hydroquinone** products, available by prescription, are the gold standard for reducing age spots.



- ◆ **Vitamin C**, an antioxidant used in creams to help protect skin from sun damage.
- ◆ **Niacinamide**, another antioxidant that helps reduce water loss in the skin and may improve skin elasticity.
- ◆ **Moisturizers** soothe dry skin and retain skin moisture. These include occlusives (petroleum jelly) and humectants (glycerin), and may also contain collagen and keratin that temporarily stretch the skin.

Men, blessed with 25 percent thicker, more collagen-rich skin than women, can keep it simple with a good sunscreen and eye cream.

- ◆ **Minimize dark undereye circles with an extra nighttime pillow.** As the delicate skin and muscle around the eyes weaken with time, the fat under the lower-lid skin can pool beneath your eye. Sleeping on two pillows can help prevent fluid accumulation.

If you want to explore other remedies, consider peels that exfoliate, and fractional resurfacing, a laser process that increases collagen production.

From the desk of David A. Chappell, MD

Dear Patient:

Spring is in the air, and with it comes our annual re-dedication to outdoor activities. In this issue of *HealthWise* we look at the latest ways to enjoy the season even more, by keeping your joints supple and pain free, and your skin protected against the elements and the aging process. In addition, we explore just what is behind the proliferation of foods claiming to be organic, natural or cage-free...and why you may want to consider including these in your daily diet.

Wishing you an active and healthy spring,

David A. Chappell, MD

Did you know?

◆ **\$1.6 billion** - Amount spent each year by Americans on anti-aging skin care products.

◆ **45%** - Percentage of Americans who regularly include organic foods in their diet.



Sources: American Academy of Dermatology, Gallup

Joint Assets

The aching, swollen, stiff joints associated with osteoarthritis (OA) have long been considered an inexorable result of aging. According to conventional wisdom, cartilage, the smooth connective tissue on the end of bones that cushion the joints, simply breaks down over a lifetime of walking, exercising and moving, allowing the bones to rub together. When medications and physical therapy no longer provide relief, a costly and time-intensive mechanical joint replacement may be the only solution. However, advances in research and a focus on prevention are providing a new outlook on an age-old problem...we bring you the latest insights, below.

Prevention

The connection between overweight and OA is even stronger than previously thought. Recent studies show that up to 65 percent of cases of OA of the knee could be avoided if weight was reduced. Consider that your knees bear a force equivalent to

three to six times your body weight with each step, so a lighter weight relieves the burden considerably. For women, extra weight is even more of a risk factor than men. In addition, fat tissue produces proteins called cytokines that cause inflammation, and in the joints, this can alter the function of cartilage cells. Gaining weight results in your body releasing more of these harmful proteins. However, losing even a few pounds can reduce joint stress and inflammation and decrease by half the risk of OA.

Take steps to manage or prevent diabetes. Some studies suggest high glucose levels trigger the formation of molecules that make cartilage stiffer and less resistant to stress, and cause inflammation that leads to cartilage loss.

Avoid practicing a sport in an intensive and prolonged way. An injured joint is nearly seven times more likely to develop arthritis than one that was never injured. The condition is now seen more frequently among 30 to 50-year-olds than previously because young athletes or middle-aged 'weekend warriors' who tear their anterior cruciate ligament (ACL) or menisci of the knee have a much higher risk of osteoarthritis 10 to 20 years after their injury.

Management

Low impact exercise is key to living well with osteoarthritis. While resting aching joints can bring temporary relief, lack of movement will ultimately lead to more discomfort. Exercise strengthens the muscles around the joint,

acting like a shock absorber, helping to reduce pain. In addition, exercise helps with weight control and is a natural mood elevator. Experts recommend low-impact activities like swimming, walking, biking, and moderate weight lifting. The Arthritis Foundation developed a form of tai chi specifically for people with arthritis, featuring agile steps and a high stance, that helps increase flexibility and improve muscle strength in the lower body.

Some new approaches to pain management show promise, but beware of unsubstantiated claims. Platelet-rich plasma (PRP) injections, which involve withdrawing blood, spinning it to separate the platelets and then injecting the concentrated platelets into a joint, are being studied for long-term effectiveness. Experts advise against costly supplements such as glucosamine, chondroitin and shark cartilage, all of which have proven of little benefit for people with OA. Some elements of Chinese medicine, including herbs and acupuncture, may help control OA symptoms in some people, but these therapies have not yet been confirmed in large, well-designed clinical studies. Also unproven are low-power laser light, copper bracelets or magnets, chiropractic manipulation and acupressure. The most effective over the counter medication are NSAIDs (non-steroidal anti-inflammatory drugs such as Advil). While Tylenol helps reduce pain and is the safest medicine for older people or those with kidney disease, it does not lower inflammation.

Finally, if you do need an orthopedic implant in the future, take comfort in the fact that development of the next generation of devices is well underway. They will likely be biologic, composed of protein and cells instead of metal and plastic...functioning as well as a normal joint and created to last a lifetime.



Number of Americans affected by osteoarthritis now and by 2030

800,000

Annual number of knee and hip replacements in the US

Sources: Stanford University, Arthritis Foundation, American Academy of Orthopaedic Surgeons



Nutrition Corner

Is What You're Reading What You're Eating?

While the evidence is not yet in on the enhanced nutritional value of organic or natural foods, consumers appear to have made their own decision. The latest research shows increasing numbers of Americans now regularly shop for these types of products and pay premium prices for 'farm to table' dishes when dining out. Many questions remain, however, chief among them: what exactly is promised by these terms...and do they deliver?

The lack of official guidelines can make it difficult to identify the difference between 'organic' and 'natural' or 'cage-free' versus 'free-range.' The Food and Drug Administration (FDA) does not formally define 'natural,' but refers to a longstanding policy that interprets it to mean nothing artificial or synthetic has been added to a food that wouldn't normally be expected, without addressing production, processing or manufacturing methods. Realizing the term is vague, even misleading, the FDA is soliciting public input until May and plans to issue more meaningful standards later this year.

For now, "all-natural" is more of a marketing ploy," according to Mick Bessire, agricultural educator at Cornell Cooperative Extension. "Antibiotics can be used in production, or chickens can be raised in battery cages and have their beaks trimmed and still be called natural."

Other frequently used terms:

Organic: A USDA Organic seal signifies that the product is made without synthetic fertilizers, irradiation, and has not been genetically modified in any way; no antibiotics or growth hormones are used in meats; 100 percent organic feed is used for livestock. The use of food additives and fortifying agents such as preservatives, artificial sweeteners and colors is severely restricted. Usually pesticide-free, too.

Hormone-Free: The best choice for hormone-free meat is products with the USDA Organic label. Hormones are already banned in egg-laying hens.

Grass-Fed: Look for an American Grass-Fed Association or Animal Welfare Approved stamp, which guarantee the animal was raised on a family-owned pasture or range. Beyond the humane benefits, some studies have found that grass-fed beef contains higher levels of healthy fatty acids and antioxidants.

Cage-Free: A voluntary label recognized by the USDA's Agricultural Marketing Service (AMS) as birds permitted to roam, but generally without access to the outdoors.

Free-Range or Free-Roaming: Another voluntary label that indicates animals have access to the outdoors but type and duration is undefined.

Pasture-raised: Means animals roam freely and eat vegetation in their natural environment.



Certified Humane: Offers more specific guidelines for cage-free, free-range and pasture-raised labels.

White/brown eggs: Does not indicate quality or nutrition levels, but is based on the breed of the egg-laying hen.

Farm-raised fish: Frequently bred to be heavier, grow faster and can contain chemicals versus wild-caught fish. Diner beware though: according to advocacy organization Oceana's recent study, restaurant customers were misled about salmon 43 percent of the time - ordering sustainable wild salmon as labeled on the menu, but receiving farmed salmon on their plates.

Is it worth the effort? Probably. While a recent study from Mayo Clinic showed that many organically and conventionally produced foodstuffs were similar nutritionally, organic foods are inarguably less processed and more sustainable choices - good for our bodies and the environment.