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Self-Management
British Columbia

In the Loop

Issue 255 - September 23, 2020



Thinning Skin and Aging

Skin, the largest organ of the body, provides a protective barrier. With an aging population and increased longevity, skin aging is becoming a global health challenge. Hubert Vuagnat, MD, with the University Hospitals of Geneva Department of Rehabilitation and Palliative Care Medical Rehabilitation Division, makes the point that as we age, each organ insufficiency can add to another and result in co-morbid states (the presence of more than one disorder in the same person) that are difficult to treat. He states, “Therefore, we must adopt a broader view of aging skin health than just concern over the skin or wound itself.”

Having thin skin and bruises that seem to appear out of nowhere are common complaints of older adults. The medical term for this is dermatoporosis, referring to extreme skin fragility, or in other words, chronic skin failure. The term was introduced in 2007 by two Swiss dermatologists to highlight the need to pay attention to the problems posed by premature skin aging beyond aesthetic considerations, according to Kaya and colleagues in their 2019 [article](#) published in *Clinics in Dermatology*. The prevalence of dermatoporosis is poorly known. One [study](#) found that in a sample of adults 65 years of age and older, 37.5 percent had dermatoporosis. The initial signs of skin fragility appear in people around 60 years of age and become well-established around 70 to 90 years of age. Other terms used to describe thin skin is crepey skin like tissue paper. Not only does aging skin become thinner, it also becomes drier, with up to 85 percent of older adults having xerosis, or extremely dry skin. Skin care, therefore, becomes even more important as we age.

Human skin varies in thickness from 0.5 millimetres for eyelids up to 4 millimetres for the skin on heels. Thin skin can be found on the hands, arms and lower legs, as these are sun-exposed areas. You may be able to see the inner parts of the body including veins, bones or tendons. Thinning occurs in the top layer of the skin (epidermis) and sometimes in the innermost layer (hypodermis) because of loss of the protective fat layer. This layer of fat helps protect skin and structures underneath it. The problem with thin skin is that it bruises and cracks or tears more easily from minimal trauma. Given the 'tissue paper' appearance of the skin, even the slightest bump or knock can cause tissue damage. Fragile blood vessels can break easily. Bruises, flat collections of blood (purpura), and raised collections of blood (hematomas) may form after even a minor injury. These kinds of injuries are being seen more often in clinical practice because the average age of the population is increasing. Thin skin is more permeable than plump, healthy skin. This can allow bacteria, such as *Staphylococcus aureus* or *Streptococcus pyogenes*, to enter the body which in turn can lead to an infection in the skin tissue (cellulitis). If cellulitis is not addressed, it can spread to other parts of the body, cause fever or swelling and increase the risk of sepsis or hospitalization with antibiotic treatment. HealthLink BC adds that thin skin

increases the risk of injury such as pressure injuries (pressure sores). Having thin skin can also make older adults more sensitive to the cold. The MedlinePlus website adds that with thinner and more fragile skin an individual may be less able to sense touch, pressure, vibration, heat, and cold.

Men compared to women

Men have 20 percent thicker skin than women because of the hormone testosterone. Women experience a faster decrease in collagen production and a drop in estrogen with menopause. While women bruise more easily, it takes a longer time for men to heal. Older adults take four times longer for wound healing compared to younger adults. Other factors that affect healing include diabetes, blood vessel changes, and lowered immunity.

Causes

Causes of thin skin include intrinsic (internal) and extrinsic (external or outside) factors. Intrinsic factors, or chronological aging, include sex hormone levels and oxidative stress. Extrinsic factors enhance intrinsic factors e.g., photo aging from sun exposure, medications and tobacco and alcohol consumption. The following is a list of contributors to thinning skin:

- Aging - is the principle risk factor for thinning skin. As we age, our bodies create fewer and fewer cells to replace dead, dying, or injured cells. As mentioned above, hormonal changes after menopause also lead to skin thinning and loss of elasticity for women
- Sun damage - the ultraviolet A and B rays from the sun can kill or damage skin cells
- Genetics - some people will be predisposed to having thinner skin
- Lack of exercise
- Chronic renal failure - one study found that chronic renal failure increased the risk of dermatoporosis five-fold, independent of age
- Smoking and alcohol use - these behaviours can accelerate the thinning of skin over time
- Oral or topical corticosteroids - taking these medications regularly causes the cells in the epidermis to become smaller and they may impact the tissue that connects skin cells. They weaken both the skin and blood vessels in the skin

Treatment

Protection of the skin is very important. You cannot reverse thinning of the skin but you can moisturize the skin. This will make the skin more flexible and less likely to tear. Prevention includes:

- Avoid contact with chemicals by wearing gloves.
- Do not use soaps that are heavily perfumed.
- Wear long sleeved tops and long skirts or pants for protection. For yard work, you may want to double up on clothing. The Mayo Clinic suggests using tubular or rolled gauze bandages for protection.
- Speak to your doctor about vitamin A cream, also known as retinol or retinoids. Vuagnat notes that although these creams are expensive, some retinoid based creams with hyaluronic acid have proven effective. Mayo Clinic's Dr. Lawrence E. Gibson reports that that it may improve the skin's ability to tolerate injuries, but suggests that people speak with their doctor about treating their skin with vitamin A.
- Consider your intake of vitamin E to support skin health, found in foods such as almonds and avocados.
- Eat a healthy diet with adequate protein, as low protein intake is associated with decreased immune function, poorer healing, and increased skin fragility. Dyer and Miller, in a 2018 [article](#), cite the recommendation that adults older than 70 years of age consume 1.0 gram of protein per kg of body weight per day, with higher amounts for supporting wound healing or replacement of normal losses. The protein with the greatest biological value is animal protein - meat, poultry and seafood. They cite one author who suggests eggs because they are affordable and good source of protein in terms of amino acid profile.
- When it comes to drinking water, staying hydrated is crucial to the health of all cells in the body. Dehydration increases the risk of skin injury, but drinking excessive amounts of water will not hydrate the skin, according to Dr. Kenneth Arndt, a dermatologist and a prior medical editor of the Harvard Special Health Report Skin Care and Repair.
- Protect the skin by using sunscreen, avoid prolonged sun exposure, avoid mid-day sun, and seek the shade. The mainstay in the prevention of skin aging is photoprotection. The American Academy of

Dermatology recommends applying sunscreen to your face, hands, neck and any other area that clothing will not cover. Do this every day including winter days. The biggest mistake in applying sunscreen is not applying enough.

- Moisturize skin regularly - Dr. Arndt suggests locking in moisture so the skin gets fatter and more flexible, and maintaining the moisture by moisturizing damp skin right after bathing and washing your hands. Moisturizers suggested by Harvard Medical School include skin creams with ceramides (a type of fat), moisturizing oils (such as mineral oil) and products with humectants (humectants are substances that help bind water to the skin for absorption - ingredients to look for include glycerin, urea, pyroglutamic acid, lactic acid, lactate salts or alpha hydroxyl acids). These keep moisture from leaving the skin. Creams are richer and provide more moisture than lotions. Speak with a pharmacist for guidance on moisturizers.
- Avoid smoking, and where possible, exposure to pollutants. Quitting cigarettes is useful for wound healing and reducing post-surgery problems such as infection.
- Avoid excessive alcohol consumption. Where possible, avoid exposure to pollutants.
- Avoid taking long, hot showers that dry out the skin.
- Use mild detergents and soft fabrics - skin care is especially vital for adults who are immobile. HealthLink BC suggests using mild detergents for washing clothes and bedding and avoiding fabric softeners. Individuals should wear clothes made from soft fabrics such as cotton.
- Avoid friction from rougher materials in clothing and washcloths. Avoid abrasive cleansers.
- Use adhesive bandages for sensitive skin, because the regular bandages may irritate or cut the skin.
- Use an air humidifier in dry environments.
- Be aware of potential causes of injury in your home environment e.g., furniture with sharp edge, things in the home that increase the risk of falls.

What about collagen supplements to address thinning skin? At this time, the

effectiveness of these supplements is not backed by scientific evidence.

When to see your doctor

Thinning skin usually doesn't present health problems, and, as the Mayo Clinic notes, it is not necessarily a sign of a serious condition. If bruising or injury to the skin occurs often, you may want to speak with your doctor. Because there is no treatment specific to addressing thin skin, prevention is the best approach. If a medication is causing thin skin, ask your prescribing doctor if there is an alternative medication that can be used.

Sources: HealthLink BC [website](#), Mayo Clinic [website](#), Medical News Today [website](#), US News and World Report [website](#), The Journal of Clinical and Aesthetic Dermatology [website](#), Next Avenue [website](#), American Academy of Dermatology Association [website](#), Harvard Health Letter [website](#), Consumer Reports [website](#), Seniors Matter [website](#), Annals of Long-Term Care [website](#), DermNet NZ [website](#), Nursing Older People [website](#), MedlinePlus [website](#), Independent Nurse [website](#)

Two of the Top Selling Dietary Supplements

Vitamin D and omega-3 (fish oil) supplements are two of the most popular dietary supplements. A 2012/13 Statistics Canada [report](#) indicates that 10 percent of Canadians are taking a fish oil supplement. In the US, the last 10 years has seen the numbers of people using fish oil increase by a factor of 10 and for vitamin D increase by a factor of 4. For omega 3 supplements, global sales are estimated to be \$3 billion.

The Vitamin D and Omega-3 Trial (VITAL) looked at the relationship between these supplements and the development of health conditions i.e., cancer and cardiovascular disease. The trial represents the largest and longest randomized trial of daily high-dose vitamin D (vitamin D3 [cholecalciferol], 2000 IU) and omega-3 fatty acid supplementation (Omacor® fish oil, 1 gram) for the prevention of cancer and cardiovascular disease in generally

healthy men and women without these conditions at baseline. Data was collected from more than 25,000 participants aged 50 and over who were randomly assigned to one of four groups: a group that took 2,000 international units of vitamin D a day plus placebo; a second group that took 1 gram of omega-3s per day plus placebo; a third group taking both vitamin D and omega-3s; and a fourth group taking two placebos. Participants were followed for an average of five years. The results were, as the Berkeley Wellness Letter states, “largely disappointing.” Findings included:

- No major adverse effects were reported
- The first published results in 2018 indicated that
 - Cardiovascular events (heart attack, stroke, or cardiovascular death considered together) or cancer - neither vitamin D nor omega-3 supplements reduced the number of cases
 - Cancer death - vitamin D appeared to lower the risk of cancer death but this needs to be confirmed in future trials with longer follow up.
 - People who do not eat fish - omega-3 supplements did not reduce the risk of major cardiovascular events in the overall study population, but looking at a subset of people who did not eat much fish, the risk was reduced by 19 percent. When heart attacks were looked at separately, the risk was reduced by 28 percent and the benefit appeared to be the strongest for African Americans.
- 2019 and 2020 results of the trial - again, overall results were disappointing
 - Bone health and falls - vitamin D was not found to affect bone density or reduce the risk of falls for generally healthy participants and vitamin D was not used with calcium
 - Colorectal polyps - omega-3s did not reduce overall number of cases of precursors to colorectal cancer i.e., adenomas or serrated polyps
 - Inflammation - three markers of systemic inflammation were not affected by daily use of vitamin D or omega-3 pills but involved healthy people so results may be different in people with inflammatory conditions
 - Chronic kidney disease associated with diabetes - neither omega-

3s nor vitamin D slowed the decline of kidney function over five years

- Heart failure - taking either of these did not reduce the chance of having a first hospitalization for heart disease

Bottom line on vitamin D

Vitamin D plays a role in the absorption of calcium for bone health. Results from pairing vitamin D with calcium have been mixed. Some studies show that vitamin D with calcium can, for people at risk of fractures, reduce fractures and maintain bone health.

People who could benefit from vitamin D supplements include people at high risk of bone fractures (e.g., people with osteoporosis or low blood levels of vitamin D), as well as people with certain conditions such as inflammatory bowel disease. Taking vitamin D by itself has not been shown to have benefits. More recent randomized controlled trials of vitamin D are not replicating the benefits found in previous observational studies showing an association only.

It is challenging for people to get enough vitamin D from exposure to sunshine and from the few food sources of vitamin D. The Unlockfood website suggests speaking with your doctor or dietitian to determine if you should take a vitamin D supplement. Health Canada recommends that both men and women over 50 should take a daily vitamin D supplement of 400 international units, in addition to eating foods that contain vitamin D (e.g., cow's milk, fortified soy and rice beverages, fortified orange juice, fatty fish like salmon and sardines, margarine, egg yolks, and fortified yogurts). Future research may lead to changing recommended levels of vitamin D.

Bottom line on omega-3s

According to the Unlockfood website, one of the best ways to get omega-3s is from eating 2 to 3 servings of fatty fish (e.g., salmon, mackerel, herring, tuna, or lake trout) a week. The Berkeley Wellness Letter reports that the exception is people who have high triglycerides and can take prescription omega-3s.

Who should take omega-3 supplements (also known as fish oil supplements)? The evidence is mixed for benefits to people at higher cardiovascular disease risk. The VITAL trials identified two groups that would benefit the most by taking omega-3 supplements: African Americans and people who rarely or never eat fish. The authors also make the point that people who eat more fish tend to eat less red meat and less saturated fat, so some of the benefits of eating fish likely come from making less unhealthy food choices.

The Unlockfood website adds other groups who may want to take a fish oil supplement include people who are vegetarian/vegan, and people who have heart disease or congestive heart failure. Both the VITAL trial and Unlockfood advise people to speak to their health care professional before starting an omega-3 supplement. When selecting a fish oil supplement, speak with your pharmacist to find a supplement with a Natural Product Number (NPN) on the label to show that it has been tested for safety and quality. The VITAL trial highlights the importance of considering a person's health history as well as the overall risks and benefits of supplementation before making the decision to take a supplement.

Sources: Berkeley Wellness Letter [website](#), Unlockfood [website](#), Unlockfood [website](#), VITAL [study](#), New England Journal of Medicine [website](#), American College of Cardiology [website](#)



Candidiasis Hypersensitivity Syndrome

According to Registered Dietitian Eleese Cunningham of the Academy of Nutrition and Dietetics' Knowledge Center Team, candidiasis hypersensitivity syndrome is also called yeast syndrome, candida-related complex, chronic candidiasis, yeast allergy, yeast overgrowth or simply “*Candida*” or “yeast problem.” Candidiasis is a term meaning that the candida in the human body starts to become more prevalent when compared to the other organisms. Supporters of this condition claim that it can cause a long list of symptoms such as loss of energy, difficulty concentrating, muscle fatigue, chronic or sudden headache, skin irritations, acne, insomnia, increased flatulence, poor digestion, intolerance of or even craving for certain kinds of food, depression and poor memory - symptoms very similar to many other conditions. This controversial condition came to light with the 1983 publication *The Yeast Connection* by Dr. William Crook, who did not conduct any research to back his claims, but announced that one in three Americans had the condition. This was followed by the marketing of supplements as a solution, but given the lack of scientific evidence, those companies selling supplements were fined by the US government and medical boards.

Research

Stephen Barrett, MD, of the website Quackwatch, uses the term "candidiasis hypersensitivity" in quotation marks to indicate that neither infection nor actual allergy is present. Steven Novella, MD, a clinical neurologist at the Yale University of Medicine and contributor to the Science-Based Medicine website, describes Candidiasis hypersensitivity as an “implausible syndrome, simply another ‘one cause of all disease’ alternative claim. Such claims are useful only for generating demand for fanciful and worthless treatments.” Novella cites a [review](#) by the American Academy of Allergy, Asthma and Immunology, which concluded that the concept is “speculative and unproven.” The review also states that the basic elements of the condition would apply to almost all patients who were sick because the symptoms are universal. As well, the review points to unnecessary negative side effects if a person takes oral anti-fungal agents.

Authors of a 2006 [study](#) set out to answer the question “Are patients with *Candida* in their stool statistically more likely to suffer from complaints,

symptoms or diseases than patients without?” The study involved 500 randomly sampled patients in 12 mainly naturopathic practices. Each subject was asked to provide stool samples and complete questionnaires asking about eating habits, smoking, chronic and acute symptoms and complaints, medical treatment and demographic data. In the end, 308 subjects completed both a stool sample and questionnaire. The data did not show that symptoms such as headache/migraine, abdominal complaints, eczema/itching, tiredness/low general performance level, pollinosis (an allergy to grass and other pollen which causes cold symptoms in sufferers; hay fever), other skin diseases or the influence of the consumption of sweets were associated with *Candida* occurrence in stools.

What about a yeast allergy?

The Medical News Today website indicates that very few people have a yeast allergy and anyone experiencing symptoms should see a doctor to confirm a diagnosis.

What about the Anti-Candida diet

Complementary and Alternative Medicine (CAM) practitioners suggest that the way to address this syndrome is through a “candida cleanse diet” but there is little evidence this diet works. Advocates of this diet promote limiting sugar and carbohydrates, avoiding foods that contain yeast, and eating more probiotic foods, and eating non-starchy vegetables, low-sugar fruits, lean protein and fermented foods. Proponents of the diet believe that *Candida* thrives on simple sugars. People report feeling better on this diet but this could be from elimination of processed foods and not from stopping the growth of yeast. According to the Healthline website, to date, no clinical trials have confirmed the diet’s effectiveness. As well, Today’s Dietitian writer and Registered Dietitian Toby Amidor describes *Candida* cleanses which generally start with detoxification, and may include fasting or restricting a diet to vegetable juice, a colon cleansing, or eating herbs that have antifungal properties.

Experts weigh in on this diet

- Heidi Silver, RD, and associate professor at Vanderbilt University

Medical Center, reports that even though the diet has been around for about 35 years, there is a lack of research supporting its use. She states, “There really isn’t a scientific evidence base to make any conclusions about the anti-Candida diet.”

- Abbey Sharp, a Toronto-based RD and blogger, is quoted by the Everyday Health website, “Research in this area is pretty sparse, and even though it often gets blamed for a lot of things, we don’t really know what causes candida overgrowth and whether [the candida diet] even works.” For a person experiencing symptoms, she suggests that they have their symptoms assessed by a doctor, eat probiotic foods that can help with gut microflora (whether or not you have candida overgrowth), avoid eliminating carbohydrates as they are a good source of fibre, and be cautious of diet websites selling products for candida overgrowth.
- Monica Reinagel, MS, LD/N, CNS, indicates that the diet, which reduces added sugars and increases intake of probiotic foods, is not harmful and is actually a good strategy for improving overall nutrition.
- Toby Amidor, RD, says restricting foods can lead to nutrition deficiencies which can be of greater concern for people with comprised immune systems. She comments that “there isn’t enough research to suggest that dietary strategies help resolve Candida infections.”
- Mayo Clinic’s Brent Bauer, MD, says that replacing processed foods and white flour with fresh foods and whole grains may start to make you feel better in general, and it does not come from stopping the growth of yeast in the gastrointestinal tract. He adds, “There are no clinical trials that document the efficacy of a candida cleanse diet for treating any recognized medical condition.”

Speak with your doctor

If you have any symptoms of concern, it is best to check with your doctor to get an accurate diagnosis to ensure appropriate treatment. Monica Reinagel suggests that if a person has frequent yeast infections, they would want to see their doctor to rule out an underlying cause such as diabetes or immune dysfunction.

Sources: Today's Dietitian [website](#), GI Society [website](#), Mayo Clinic [website](#),

Science-Based Medicine [website](#), Quackwatch [website](#), Women's Health [website](#), Abbey Sharp Abbey's Kitchen [website](#), Quick and Dirty Tips [website](#), Healthline [website](#), Western New York Urology Associates [website](#), SELF [website](#), US News and World Report [website](#), MedicineNet [website](#), Medical News Today [website](#), Everyday Health [website](#)



Heart Rate 101

The Heart and Stroke website explains that your heart rate, also known as your pulse, is created by your heart contracting and then relaxing to pump blood throughout the body. Each beat of your heart means blood is pushed through your arteries. Your resting heart rate is the number of times your heart beats when you are not working hard and you are not active, reported as beats per minute. The Harvard Medical School website comments that knowing one’s heart rate is important because of the importance of the heart’s function (called “cardiac output”). Cardiac output is directly related to heart rate and stroke volume (the amount of blood pumped out with each beat). When the heart is stronger through exercising (the heart is a muscle) it allows more blood to be pumped out with each heart beat (larger stroke volume), and, therefore, the heart doesn’t have to beat that fast - in other words, the heart functions more efficiently. This is the reason athletes can have a resting heart rate of 40 beats per minute. The American Heart Association states, “Your pulse is one tool to help get a picture of your health.” It can help assess your fitness level and may also help identify

developing health problems. A heart rate is also considered one of the body's most basic vital signs that tells how much your heart is working at rest and during activity.

Everyone's heart rate is different, and it changes as we age. A normal resting heart rate for adults is between 60 and 100 beats per minute according to the Mayo Clinic and WebMD, while the Berkeley Wellness Letter defines a normal range as being between 50 to 100 beats per minute. Children have naturally higher normal heart rates than adults. Most people are in the range of 60 to 80 beats per minute. Individual resting heart rates vary from person to person over the course of the day because of factors such as genetics, emotions (being excited, anxious, or angry), pain, fever, drinking a lot of alcohol or coffee, and smoking. Harvard Medical School states, "Regardless of what is considered normal, it's important to recognize that a healthy heart rate will vary depending on the situation."

Checking your heart rate

To check your heart rate, place two fingers on the inside of your wrist, elbow, the top of the foot, or side of the neck (windpipe). Count the number of beats in 15 seconds and multiply by four to get the number of beats for 60 seconds. Also be aware of whether your heart beats at an even or uneven rhythm. A normal heart beat is a steady rhythm like a clock (tick tock tick tock). The New Zealand Heart Foundation reminds people to wait at least five minutes before checking your heart rate if you have been active. Pam R. Taub, MD, and board-certified cardiologist and associate professor of medicine at the University of California, San Diego, tells the ACTIVE website that it is most useful to track your heart rate over time and inform your doctor about any substantial shifts. She comments, "What's even more important than a single heart rate is the trend."

Factors that can affect your heart rate include: age, being a smoker, medications (medications that block your adrenaline, beta blockers, tend to slow your pulse, while too much thyroid medication or too high of a dosage will raise it), temperature of the air (when temperature and humidity increase, the heart pumps a little more blood which may cause an increase in your pulse rate by no more than 5 to 10 beats a minute), having chronic conditions

such as diabetes, high cholesterol or cardiovascular disease, body position (lying down or standing up), emotions, lack of sleep, and body size (people who are very obese may have a higher than normal resting pulse, but usually not over 100 beats per minute). Generally speaking, your resting heart rate lowers with increased fitness e.g., athletes can have a resting heart rate of 40 beats per minute. As well, your heart rate will vary depending on when it is measured and what you were doing immediately before you took the measurement. According to the Berkeley Wellness Letter, over time with increased fitness, your resting heart rate may be lowered. Research has found that people who engage in regular exercise have resting heart rates of about 10 beats per minute less than people who are sedentary. A 2018 [meta-analysis](#) found that people who participated in endurance training and yoga had a lower resting heart rate when compared to people who did not exercise.

Problems with heart rate

Arrhythmia is when the timing of your heart rate is “off” - when there is a problem with your heart rhythm or rate. Causes include high blood pressure, clogged or hardened arteries, problems with heart valves, trauma as a result of a heart attack, recovering from heart surgery or having an electrolyte imbalance e.g., too much or too little potassium. Four types of arrhythmia include:

- Tachycardia - heart beats usually over 100 beats a minute. Groups affected included children and more women than men. Main causes include stress, smoking, too much caffeine from caffeinated beverages, and too much alcohol.
- Bradycardia - the heart beats below 60 beats per minute (with the exception of athletes). This can occur because of hypothyroidism, an infection, a chemical imbalance in the blood, breathing problems e.g., obstructive sleep apnea, inflammatory conditions such as lupus, or a heart problem that developed before birth.
- Supraventricular arrhythmia - an arrhythmia starting in the upper chambers of the heart
- Ventricular arrhythmia - an arrhythmia starting in the lower chambers of the heart

Heart rate and exercise

To achieve health benefits, the [Canadian Physical Activity Guidelines](#) recommend that adults aged 18 and over accumulate at least 150 minutes of moderate- to vigorous-intensity aerobic physical activity per week, in bouts of 10 minutes or more. If you have a heart condition, talk to your doctor about what exercise and target heart rates are safe for you. When doing cardiovascular exercise, you want your heart rate to go up but not excessively. Your maximum rate can be calculated by subtracting your age from 220 (e.g., if you are 50, your maximum heart rate would be 170). To calculate the range, multiply by 0.6 for the lower end and by 0.8 for the upper end. In the case of a 50 year old adult, the range would be 102 to 136. For beginners (people who are sedentary and becoming active) start with 50 to 60 percent of your maximum heart rate. Endurance exercise at moderate intensity increases your heart rate between 55 and 70 percent of your safe maximum heart rate. Interestingly, Anne R. Crecelius, associate professor of health and sport science at the University of Dayton, comments that this formula is not based on empirical research (a research approach that makes use of evidence-based data). She suggests a more accurate formula of multiplying your age by 0.7 and then subtracting that number from 208. Also, she notes that, as with any prediction equation, “there is always some individual variability.”

Another way to gauge your intensity without checking your pulse is by knowing the feeling of achieving your target heart rate e.g., how hard you are breathing, how much you sweat and how hard your heart is pumping. This is called your “rate of perceived exertion.” Another method is the “talk test” - working out at a moderate intensity allows to speak comfortably. If you can do this, your exercise intensity is in the right zone.

Fitness equipment such as treadmills and elliptical machines can have hand grips that measure your heart rate, but Harvard Medical School advises people not to rely on these devices as they are “notoriously inaccurate.”

Does a high resting heart rate increase heart disease risk?

As noted by Berkeley Wellness Letter, “In general, a slower resting heart rate is better than a faster one, because a faster rate puts more stress on your heart

and blood vessels.”

What has research found for people with faster resting heart rates?

- An association with an increased risk of heart disease and death from all causes, regardless of an individual's fitness level and other cardiovascular risk factors e.g., high blood pressure, high cholesterol and being overweight.
- Poorer outcomes for both healthy people and people with heart disease.
- One study found that postmenopausal women with the highest resting heart rate had an increased risk of heart attack compared to those with the lowest resting heart rate, especially for women between 50 and 64, with other risk factors for a heart attack taken into account
- Studies have found that a higher resting heart rate may be a predictor of premature death

Reducing your resting heart rate

To temporarily reduce your resting heart rate, you can relax e.g., sit down and take a few deep breaths. Lowering your resting heart rate may be achieved by following a healthy lifestyle e.g., exercise regularly, eat a healthy diet, manage your weight, reduce your intake of alcohol and caffeine, and stop smoking. Engage in stress reducing activities such as meditation, tai chi or mindfulness.

According to the Berkeley Wellness Letter, individuals who may benefit from lowering their resting heart rate include people with certain heart conditions, people with hypertension, and based on preliminary research, maybe even people who are healthy. The Berkeley Wellness Letter notes, however, that there is no consensus of an “optimal heart rate” and the level at which increased health risks begin.

When to consult your doctor

Dr. Robert H. Shmerling of Harvard Medical School advises people to talk with their doctor if they have questions or concerns regarding their heart rate. HealthLink BC indicates that many changes in heart rate or rhythm are minor and do not require medical treatment if no other symptoms or a history of

heart disease are present. Consult your doctor if:

- The medication you are taking causes you to feel dizzy or faint
- If you have a fast heartbeat (consistently above 100 beats a minute and you are not a trained athlete) or a low pulse, and especially if you have other signs/symptoms such as dizziness, shortness of breath and fainting, as this may indicate an underlying problem.
- If you are physically fit, and you have a high resting heart rate, while there may not be anything you need or can do about it, this information is important for evaluating your heart disease risk

Irregular heart rate

Along with heart rate is the issue of rhythm. An irregular pulse is when the rhythm is irregular or jumping around as opposed to regular and steady, racing when you are at rest, or seems unusually slow for some periods of time or most of the time. This is called an arrhythmia. While this can be harmless, it is important to ensure that you do not have a heart condition such as atrial fibrillation (a condition causing an irregular and often rapid heart rate) as AF increases the risk of a stroke and heart failure.

Heart palpitations are described as irregular heart beating where you feel your heart beating in your ears or chest when you are lying down, and you feel that your heart is beating too fast or slow, fluttering, thudding or pounding. Most incidents of heart palpitations are harmless and occur occasionally, but if you experience them on a regular basis, speak with your doctor.

Resources

- HealthLink BC [website](#) to find your target heart rate
- HealthLink BC [website](#) Change in Heartbeat - Check your Symptoms
- Heart Foundation New Zealand [video](#) on how to check your pulse

Sources: Mayo Clinic [website](#), Berkeley Wellness Letter [website](#), Heart and Stroke [website](#), American Heart Association [website](#), Harvard Medical School [website](#), Harvard Medical School [website](#), Heart Foundation New Zealand [website](#), ACTIVE [website](#), Insider [website](#), The Conversation

[website](#), MedicineNet [website](#)



Long Naps Beneficial?

The practice of daytime napping is common in many populations, such as in Mediterranean countries and China, and with older adults. The increased popularity of this practice is seen with the increase in “napping spaces” provided by workplaces and universities. Napping has been traditionally seen as a way to improve performance and alertness, while more recent research has investigated the association between napping and cardiovascular disease, diabetes and Parkinson’s disease. At this time, because of mixed research findings, it is not clear whether napping is beneficial or harmful.

A 2015 [meta-analysis](#) did not find clarity on the issue of health effects of napping. The meta-analysis looked at associations between daytime napping and risk of death from all causes, cardiovascular disease and cancer. The authors concluded that, based on a limited number of studies and potential biases, daytime napping is a predictor of increased all-cause mortality but not of cardiovascular disease and cancer mortality. Because of the limited evidence, however, the findings should be interpreted with caution.

A 2017 [systematic review and meta-analysis](#) of observational studies of the association between daytime napping and risk of diabetes concluded that short daytime napping (less than 60 minutes) was not associated with diabetes incidence but long daytime napping (over 60 minutes) was

associated with a 31 percent increased risk of diabetes. The authors call for more research to confirm the findings.

A [study abstract](#) presented at the European Society of Cardiology Congress 2020 looked at the impact of taking a nap for more than one hour a day. The findings, considered preliminary, have not yet been published. Specifically, the authors reviewed available studies to evaluate the association between napping and cardiovascular disease and the risk of death from all causes. Previous research on the link between daytime naps and death or cardiovascular disease has produced conflicting results, and the studies did not consider nighttime sleep duration.

In the analysis, more than 20 studies were included with a total of 313,651 participants. Of these participants, 39 percent were regularly napping. The findings included:

- Naps for more than 60 minutes were associated with a 30 percent greater risk of death from all causes and 34 percent greater risk of developing cardiovascular disease when compared to those who do not nap.
- When considering the amount of sleep at night, long naps were associated with an increased risk of death only in people who slept more than 6 hours per night.
- Naps, regardless of their duration, were linked with a 19 percent increased risk of death. Women showed more of an association (22 percent increased risk of death) as did older participants (17 percent increased risk of death).
- Naps for less than 60 minutes were not associated with an increased risk of developing cardiovascular disease.

Dr. Zhe Pan, study author, made the following points:

- The results suggest that for people who get insufficient night time sleep, a nap shorter than 60 minutes, and especially less than 30 to 45 minutes, may improve heart health.
- Possible reasons why long napping may have this negative association is that longer naps are linked to higher levels of inflammation.

Inflammation can affect heart health and longevity.

- The bottom line: if you do not currently nap, the evidence does not support starting this practice. If you are napping regularly, the findings suggest that it is safest to limit a nap to under 60 minutes.

A limitation of the study is that it showed an association only and does not show a direct link between napping and an increased risk of developing cardiovascular disease or having an early death. Other factors such as lifestyle, ages, or underlying conditions could have contributed to the results in the reviewed studies.

The Mayo Clinic's sleep specialist Dr. Eric J. Olson is against longer naps for another reason - they take an individual into deeper stages of sleep, resulting in a "hangover effect," or sleep inertia, where a person feels groggy and disoriented after waking up from a nap. To avoid this, nap for under 30 minutes. Another negative effect of long naps is that they can make insomnia or poor nighttime sleep worse. Feeling the need to nap for a long time may signal a sleep disorder, or can be from your schedule, diet, or bedtime routine. If you have a sudden need to take long naps without an obvious reason, speak with your doctor.

What is the ideal nap duration?

- The Sleep Foundation recommends a short nap (20-30 minutes) for improved alertness and performance without sleep inertia or interfering with nighttime sleep. Most people feel refreshed after a nap that lasts approximately 20 minutes. This is in line with an often cited 1994 [study](#) by NASA finding that long-haul pilots napping for 28.5 minutes were 50 percent more alert compared to pilots who did not nap. They also performed 34 percent better on certain tasks.
- The Mayo Clinic puts the ideal duration of a nap at 10 to 20 minutes, but note that young adults may be able to tolerate longer naps. Three cases where a person may choose to nap include: experiencing new fatigue or unexpected sleepiness; preparing for a long work shift; or wanting to take daily naps as part of a routine. The Sleep Foundation calls these three cases emergency napping, planned or preparatory napping and habitual napping. The Mayo Clinic also points out that not

all people are able to nap during the day or are unable to sleep anywhere other than their bed.

Best time of day to nap

Factors that determine the best time of day to nap include an individual's need for sleep, their sleep schedule, age and medication use. Charlene Gamaldo, MD, medical director of the Johns Hopkins Medicine Sleep Disorders Clinic, reports that, based on research, the ideal time for a nap for older adults is between 1 and 4 pm. This is based on the sleep-wake cycles for older adults. She states that napping at this time of day will give you “the most bang for your buck.” In contrast, the Mayo Clinic suggests that a person not nap past 3 pm. Sleeping too late in the day can interfere with the length and quality of nighttime sleep, while your body may not be ready to sleep if you try napping too early in the day.

Getting adequate nighttime sleep

Dr. Robert Stickgold, director of Harvard Medical School's Center for Sleep and Cognition, cautions against using naps as a way to address a sleep deficit. He states, “Using naps to try to maintain function in the face of larger sleep deficits is a disaster waiting to occur.”

Sources: Science Daily [website](#), Mayo Clinic News Network [website](#), Mayo Clinic [website](#), Insider [website](#), New York Times [website](#), EurekAlert! [website](#), The Sleep Foundation [website](#), The Sleep Foundation [website](#), Johns Hopkins Medicine [website](#), The Journals of Gerontology [website](#)



Free Webinar on Flu Season and COVID-19

The Canadian Frailty Network (CFN) is Canada's sole network devoted to improving care for older Canadians living with frailty and supporting their families and caregivers. The network is hosting a webinar on "Protecting your Health: Preparing for the influenza season in the age of COVID-19." Registration is free and is open to all.

Date: **Wednesday, September 30, 2020**

Time: **9 am to 10 am PST** (12:00 pm to 1:00 pm ET)

Moderated by: Andre Picard (Health Report & Columnist, Globe & Mail)

Hosted by: Dr. John Muscedere (Scientific Director & CEO, Canadian Frailty Network)

Panelists:

Dr. Kieran Moore (Medical Officer of Health, KFL&A Public Health)

Dr. Melissa Andrew - Associate Professor of Medicine, Dalhousie University

Dr. Shelley McNeill - Professor of Medicine, Dalhousie University

For more information and to register, visit the Canadian Frailty Network [website](#).



The Victoria Assistive Devices and Coaching Study (VADAC) is Looking for Male Health Coaches

The University of Victoria - Institute on Aging & Lifelong Health is conducting an exciting new research study in the lower Vancouver Island area. The study will evaluate the effectiveness of health coaching and home assistive devices.

Health Coaches will receive a two-day training, be paired with a study participant and will provide a 30-minute weekly telephone call for a period of three months to provide encouragement, guidance, support and teach participants key self-management skills and strategies to effectively manage their health. *For more information please contact:*

Fran, Project Lead @ 250-516-5742 or email fhensen@uvic.ca

or

Suzanne, Health Coach Coordinator @ 1-866-902-3767 (toll free) or email VADAC@uvic.ca.



**University
of Victoria**

Institute on Aging
& Lifelong Health

Cancer Survivors Needed for Online Survey

Researchers at the University of Toronto are conducting an online study to understand the physical and mental health of cancer survivors during the COVID-19 pandemic.

Who can participate?

Anyone diagnosed with cancer who is 18 years of age or older and has English proficiency.

What does it involve?

Participants complete a one-time online survey that takes about 45 minutes.

The survey link is available [here](#).

For more information, please email exercise.oncology@utoronto.ca.

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Researchers at the University of Toronto are conducting an online study to understand the physical and mental health of cancer survivors during the COVID-19 pandemic.

Who can participate?
Anyone diagnosed with cancer who is:

- 18+ years
- English proficiency

What does it involve?

- Online survey which takes about 45 min to complete (one time only)

You will receive free physical activity resources and a chance to win 1 of 6 \$25 CAD Amazon gift cards!

To participate in this survey, please use this link below:
<https://redcap.utoronto.ca/surveys/?s=NWWARAMCK9>

Any Questions? Please feel free to contact the Exercise Oncology Lab!
Email: exercise.oncology@utoronto.ca
Phone: 416-946-5856

EXERCISE ONCOLOGY LAB
UNIVERSITY OF TORONTO

UNIVERSITY OF TORONTO
FACULTY OF KINESIOLOGY + PHYSICAL EDUCATION

Please send your ideas and suggestions to theloop@uvic.ca



Self-Management BC is supported and funded through a partnership with the Patients as Partners Initiative within the BC Ministry of Health.

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