# Parts of the fingernail diagram

A nail is a claw-like keratinous plate at the tip of the fingers and toes in most primates. Nails correspond to claws found in other animals. Fingernails and toenails are made of a tough protective protein called alpha-keratin which is a polymer and found in the hooves, hair, claws and horns of vertebrates. The nail consists of the nail plate, the nail matrix and the nail bed below it, and the grooves surrounding it. The matrix, sometimes called [3] the matrix unguis , keratogenous membrane, nail matrix, or onychostroma, is the tissue or germinal matrix which the nail protects. The width and thickness of the nail plate is determined by the size, length, and thickness of the matrix, while the shape of the fingertip bone determines if the nail plate is flat, arched, or hooked. This makes the capillaries in the nail bed below visible, resulting in a pink color. The lunula "small moon" is the visible part of the matrix, the whitish crescent-shaped base of the visible nail. The nail bed is the skin beneath the nail plate. The epidermis is attached to the dermis by tiny longitudinal "grooves" called matrix crests cristae matricis unguis. The nail sinus sinus unguis is where the nail root is; [4] i. It originates from the actively growing tissue below, the matrix. The nail plate corpus unguis [4] is the hard part of the nail, made of translucent keratin protein. Several layers of dead, compacted cells cause the nail to be strong but flexible. Its transverse shape is determined by the form of the underlying bone. The free margin margo liber or distal edge is the anterior margin of the nail plate corresponds to the abrasive or cutting edge of the nail. It forms a seal that protects the nail bed. The onychodermal band is the seal between the nail plate and the hyponychium. It is just under the free edge, in that portion of the nail where the nail bed ends and can be recognized in fair-skinned people by its glassy, greyish colour. It is not visible in some individuals while it is highly prominent on others. Together, the eponychium and the cuticle form a protective seal. The cuticle is the semi-circular layer of almost invisible dead skin cells that "ride out on" and cover the back of the visible nail plate while the eponychium is the fold of skin cells that produces the cuticle. They are continuous, and some references view them as one entity; in this classification, the names eponychium , cuticle , and perionychium are synonymous. The nail wall vallum unguis is the cutaneous fold overlapping the sides and proximal end of the nail. The lateral margin margo lateralis lies beneath the nail wall on the sides of the nail, and the nail groove or fold sulcus matricis unguis are the cutaneous slits into which the lateral margins are embedded. The paronychium is the soft tissue border around the nail, [8] and paronychia is an infection in this area. The hyponychium is the area of epithelium, particularly the thickened portion, underlying the free edge of the nail plate. It is sometimes called the quick as in the phrase 'cutting to the quick'. A healthy fingernail has the function of protecting the distal phalanx , the fingertip, and the surrounding soft tissues from injuries. It also serves to enhance precise delicate movements of the distal digits through counter-pressure exerted on the pulp of the finger. Finally, the nail functions as a tool enabling a so-called "extended precision grip" e. The growing part of the nail is under the skin at the nail's proximal end under the epidermis , which is the only living part of a nail. In mammals, the growth rate of nails is related to the length of the terminal phalanges outermost finger bones. Thus, in humans, the nail of the index finger grows faster than that of the little finger; and fingernails grow up to four times faster than toenails. In humans, fingernails grow at an average rate of approx. Actual growth rate is dependent upon age, sex, season, exercise level, diet, and hereditary factors. Contrary to popular belief, nails do not continue to grow after death; the skin dehydrates and tightens, making the nails and hair appear to grow. The nail is often considered an impermeable barrier, but this is not true. This permeability has implications for penetration by harmful and medicinal substances; in particular cosmetics applied to the nails can pose a risk. Healthcare and pre-hospital-care providers EMTs or paramedics often use the fingernail beds as a cursory indicator of distal tissue perfusion of individuals who may be dehydrated or in shock. The fingernail bed is briefly depressed to turn the nail-bed white. When the pressure is released, the normal pink colour should be restored within a second or two. Delayed return to pink color can be an indicator of certain shock states such as hypovolemia. Nail growth record can show the history of recent health and physiological imbalances, and has been used as a diagnostic tool since ancient times. These lines are usually a natural consequence of aging, although they may result from disease. Discoloration , thinning, thickening, brittleness, splitting, grooves, Mees' lines , small white spots , receded lunula, clubbing convex , flatness, and spooning concave can indicate illness in other areas of the body, nutrient deficiencies, drug reaction or poisoning, or merely local injury. Nails can also become thickened onychogryphosis , loosened onycholysis , infected with fungus onychomycosis , or degenerate onychodystrophy. A common nail disorder is an ingrowing toenail onychocryptosis. DNA profiling is a technique employed by forensic scientists on hair, fingernails, toenails, etc. The best way to care for nails is to trim them regularly. Filing is also recommended, as to keep nails from becoming too rough and to remove any small bumps or ridges that may cause the nail to get tangled up in materials such as cloth.

Bluish or purple fingernail beds may be a symptom of peripheral cyanosis , which indicates oxygen deprivation. Nails can dry out, just like skin. They can also peel, break, and be infected. Toe infections, for instance, can be caused or exacerbated by dirty socks , specific types of aggressive exercise long-distance running , tight footwear , and walking unprotected in an unclean environment. Nail tools used by different people may transmit infections. Standard hygiene and sanitation procedures avoid transmission. In some cases, gel and cream cuticle removers can be used instead of cuticle scissors. Nail disease can be very subtle and should be evaluated by a dermatologist with a focus in this particular area of medicine. However, most times it is a nail technician who will note a subtle change in nail disease. Inherited accessory nail of the fifth toe occurs where the toenail of the smallest toe is separated, forming a smaller "sixth toenail" in the outer corner of the nail. Vitamin A is an essential micro-nutrient for vision, reproduction, cell and tissue differentiation, and immune function. Vitamin D and calcium work together in cases of maintaining homeostasis, creating muscle contraction, transmission of nerve pulses, blood clotting, and membrane structure. A lack of vitamin A, vitamin D, or calcium can cause dryness and brittleness. Insufficient vitamin B12 can lead to excessive dryness, darkened nails, and rounded or curved nail ends. Insufficient intake of both vitamin A and B results in fragile nails with horizontal and vertical ridges. Some over-the-counter vitamin supplements such as certain multivitamins and biotin may help in growth of strong nails, although this is quite subjective. Protein is a building material for new nails; therefore, low dietary protein intake may cause anemia and the resultant reduced hemoglobin in the blood filling the capillaries of the nail bed reflects varying amounts of light incident on the nail matrix resulting in lighter shades of pink ultimately resulting in white nail beds when the hemoglobin is very low. When hemoglobin is close to 15 or 16 grams, most of the spectrum of light is absorbed and only the pink color is reflected back and the nails look pink. Essential fatty acids play a large role in healthy skin as well as nails. Splitting and flaking of nails may be due to a lack of linoleic acid. Iron-deficiency anemia can lead to a pale color along with a thin, brittle, ridged texture. Iron deficiency in general may cause the nails to become flat or concave, rather than convex. Manicures for the hands and pedicures for the feet are health and cosmetic procedures to groom, trim, and paint the nails and manage calluses. They require various tools such as cuticle scissors , nail scissors, nail clippers , and nail files. Artificial nails can also be fixed onto real nails for cosmetic purposes. A person whose occupation is to cut, shape and care for nails as well as to apply overlays such as acrylic and UV gel is sometimes called a nail technician. The place where a nail technician works may be a nail salon or nail shop or nail bar. Painting the nails with colored nail polish also called nail lacquer and nail varnish to improve the appearance is a common practice dating back to at least B. With the rise of smartphones, some analysts have noted a trend of the nelfie nail selfie , wherein people share their nail art online. The record-holder for women is Lee Redmond of the U. The nail is an unguis , meaning a keratin structure at the end of a digit. Other examples of ungues include the claw, hoof and talon. The nails of primates and the hooves of running mammals evolved from the claws of earlier animals. In contrast to nails, claws are typically curved ventrally downwards in animals and compressed sideways. They serve a multitude of functionsâ€"including climbing, digging, and fightingâ€"and have undergone numerous adaptive changes in different animal taxa. Claws are pointed at their ends and are composed of two layers: a thick, deep layer and a superficial, hardened layer which serves a protective function. The underlying bone is a virtual mold of the overlying horny structure and therefore has the same shape as the claw or nail. Compared to claws, nails are flat, less curved, and do not extend far beyond the tip of the digits. The ends of the nails usually consist only of the "superficial", hardened layer and are not pointed like claws. With only a few exceptions, primates retain plesiomorphic original, "primitive" hands with five digits, each equipped with either a nail or a claw. For example, nearly all living strepsirrhine primates have nails on all digits except the second toe which is equipped with a grooming claw. Tarsiers have a grooming claw on second and third toes. Less commonly known, a grooming claw is also found on the second pedal digit of owl monkeys Aotus , titis Callicebus , and possibly other New World monkeys. A study of the fingertip morphology of four small-bodied New World monkey species indicated a correlation between increasing small-branch foraging and:. This suggests that whereas claws are useful on large-diameter branches, wide fingertips with nails and epidermal ridges were required for habitual locomotion on small-diameter branches. It also indicates keel-shaped nails of Callitrichines a family of New World monkeys is a derived postural adaptation rather than retained ancestral condition. From Wikipedia, the free encyclopedia. For the construction technique, see Toenailing. Human nails. Main article: Nail disease. This section needs additional citations for verification. Please help improve this article by adding citations to reliable sources. Unsourced material may be challenged and removed. May Learn how and when to remove this template message. Main articles: manicure and

pedicure. This article uses anatomical terminology. Progress in Materials Science. Retrieved 10 March Biology Online. Schoon, Dougles Nail Structure and Products Chemistry. Functional human anatomy. Atlas of orthopaedic surgical exposures. American Family Physician. In Ravosa, Matthew J. Primate Origins: Adaptations and Evolution. Journal of the European Academy of Dermatology and Venereology. Clinical dermatology. Malden, Mass: Blackwell Science. Guinness World Records. Retrieved C; Carroll, A, E Walters and G, Chapter XI, Patient assessment. Ann Emerg Med. Luke's Hospital. Capillary nail refill test. Journal of the American Academy of Dermatology. British Medical Journal. Skin Appendage Disorders. Rucker; D. McCormick; J. Suttie Clinics in Dermatology. NY Post. Retrieved 21 February December The Anatomical Record. American Journal of Physical Anthropology. Human regional anatomy. Adam's apple Throat Nape. Skin and related structures. Basal keratinocyte Lamina lucida Lamina densa. Papillary Dermal papillae Reticular. Sweat glands : Apocrine sweat gland Eccrine sweat gland Sebaceous. Outer root sheath Inner root sheath Henle's layer Huxley's layer. Cuticle Cortex Medulla Bulb with matrix cells Hair follicle. Arrector pili muscle. Hair sebaceous gland. Categories : Nails anatomy. Hidden categories: Webarchive template wayback links All articles with unsourced statements Articles with unsourced statements from February Articles contradicting other articles Articles with unsourced statements from July Articles needing additional references from May All articles needing additional references Commons category link is on Wikidata Wikipedia articles with BNF identifiers Wikipedia articles with GND identifiers Wikipedia articles with LCCN identifiers Wikipedia articles with NDL identifiers Wikipedia articles with TA98 identifiers Wikipedia articles with TH identifiers. Namespaces Article Talk. Views Read Edit View history. Help Learn to edit Community portal Recent changes Upload file. Download as PDF Printable version. Wikimedia Commons. A gorilla 's fingernails. Anatomical terminology [ edit on Wikidata ]. Skin glands Sweat glands : Apocrine sweat gland Eccrine sweat gland Sebaceous. Root sheath Outer root sheath Inner root sheath Henle's layer Huxley's layer. Nails serve several important purposes. Nails are constantly growing, but their growth rate slows down due to poor circulation and aging. Fingernails grow faster than toenails, at a rate of 3 millimeters per month. It takes six months for a fingernail to grow from the root to the free edge. Toenails grow much more slowly, at just 1 millimeter per month. Each of these six components has a specific function, and if a component of the nail structure is disrupted, the nail can look abnormal. Sign up for our Health Tip of the Day newsletter, and receive daily tips that will help you live your healthiest life. Understanding the formidable nail barrier: A review of the nail microstructure, composition and diseases. Table of Contents View All. Table of Contents. Nail Growth. Nail Structure. Was this page helpful? Thanks for your feedback! Sign Up. What are your concerns? Article Sources. Verywell Health uses only high-quality sources, including peer-reviewed studies, to support the facts within our articles. Read our editorial process to learn more about how we fact-check and keep our content accurate, reliable, and trustworthy. Related Articles. Causes of a Loose Toenail or Fingernail. The 7 Best Toenail Fungus Treatments of Understanding the Causes and Treatments of Onycholysis. Nail Problems Associated with Psoriasis. Treatment for Blood Under Your Nail. The human nail is a plate of keratin that lies on the tips of the fingers and toes. The main purpose of the nails are to protect the fingers and toes, however, the fingernail also assists with certain physical activities in daily life. The human nail is constantly growing and being removed by clipping or biting. In childhood, it takes the nail about 3 months to grow out completely while this may take up to 6 months in the elderly. Like any part or organ of the human body, the condition of the fingernails and toenails are dependent on the general health status. Therefore changes and defects in the nails may be indicative of certain systemic diseases. The matrix is the source of the cells that become the keratinized layers of the nail plate. It is located deep in the nail sinus. As new cells grow, it pushes out the nail plate replacing it with new keratin at the proximal part of the nail plate that lies adjacent to the matrix. Poor circulation, inadequate nutrition and localized or systemic diseases can affect the growth of the new cells to make up the nail plate. The nail bed lies underneath most of the nail plate and is a continuation of the skin around the nail. It contributes to the keratin of the nail plate although it is to a lesser degree than the matrix. Blood in the dermal capillaries of the nail bed give the nail its characteristic light pink color. This the largest part of the nail and is composed of laminated layers of keratin. It is similar in structure to human hair and skin and is made up of dead cells. Ask a Doctor Online Now! The proximal edge of the nail plate is the nail root which emanates from the nail sinus. It extends across the fingers and toes to protrude from the tip depending on the length. This free end of the nail is also known as the distal edge, while the sides are known as the lateral edges. The nail plate is smooth and curved and light pink in color due to underlying dermal capillaries in the nail bed. Changes in the nail color may be linked to various diseases which are discussed under Discolored Nails. At times, ridges, lines, changes in thickness and discoloration may arise as a

result of disease. This is discussed further under Fingernail Ridges. Non-pathological changes of the nail plate , include :. Related Articles. Please note that any information or feedback on this website is not intended to replace a consultation with a health care professional and will not constitute a medical diagnosis. By using this website and the comment service you agree to abide by the comment terms and conditions as outlined on this page. Parts of the Nail Nail Matrix The matrix is the source of the cells that become the keratinized layers of the nail plate. Nail Bed The nail bed lies underneath most of the nail plate and is a continuation of the skin around the nail. Nail Plate This the largest part of the nail and is composed of laminated layers of keratin. How Nail Biting Causes Infections. Having a good understanding of how the nail is structured will make it easier for you to follow our nail tutorials. This is the visible part of the nail that sits on top of the nail bed. The overlapping skin surrounding the nail. Its job is to protect the matrix from being invaded by bacteria and physical damage. This is where the nail is made. It is the only living part of the nail, and contains nerves and blood vessels so that cell reproduction can occur. Nail Structure Having a good understanding of how the nail is structured will make it easier for you to follow our nail tutorials. The Lunula The half moon shaped point where the matrix and nail bed meet. The Cuticle The overlapping skin surrounding the nail. The Hyponichium This skin line where the nail plate separates from the nail bed. The Nail Walls The skin on both sides of the nail plate. The Nail Bed This is the part of the finger underneath the nail plate. The Matrix This is where the nail is made. About Hi, I'm Nailbees! Here I'm going to share everything I know about nails! Search Nailbees Search for:. Stay in Touch! My Inspirations. The cookie settings on this website are set to 'allow all cookies' to give you the very best experience. Please click Accept Cookies to continue to use the site. Authors: Doug Schoon and Ana Seidel. Do you know where your cuticle is? Or your hyponychium? Not only is the general public confused about the names for the parts of the natural nail, but many nail technicians are not able to name the various major parts and know their function. Where new nail plate cells are created and the nail plate begins to form. This area is the front part of the nail matrix. Not all fingers have a visible lunula. Usually, it is easiest to find a lunula on a thumb or index finger. Since it is the exposed portion of the matrix, this area is not protected by the eponychium. Living skin at the base of the nail plate that covers the matrix area. The proximal fold is a required guardian seal that prevents germs and bacteria from getting to the nail matrix, where new cells are created. I always know when girls are cutting. Their entire cuticle line is red and inflamed. Basically, their eponychium is infected all the time. If you go to a salon for a manicure, do not ever let your nail tech cut this skin. A thin layer of dead tissue riding on the nail plate to form a seal between the nail plate and eponychium to prevent pathogens from infecting the matrix area. The cuticle pulls away from the underside of the eponychium and attaches tenaciously to the nail plate. Composed of hardened, flat, translucent, non-living, keratin nail cells that form a solid, protective layer over the underlying soft tissue. The thickness of your nails is determined by the size of your matrix. The soft, pink tissue that sits underneath and supports the nail plate while it grows. The onychodermal band works in the same way as the proximal fold on the top surface of the nail. When looking at your bare nails, you can see this darker band of skin right before your nail plate leaves the nail bed to become your free edge. A thin layer of dead tissue riding on the nail plate to form a seal between the nail plate and hyponychium to prevent pathogens from infecting the nail bed. The solehorn cuticle pulls away from the underside of the hyponychium and attaches tenaciously to the nail plate. Bone supports and shapes both the nail matrix and nail bed. The flat or curved shape of your nails is determined by the shape of your fingertip bone. The dead cuticle skin needs to be removed with the correct tools. Created with Sketch. Toggle menu Gift Certificates. Shop Shop. Resources Resources. Take The Challenge. Forgot your password? Matrix Where new nail plate cells are created and the nail plate begins to form. Eponychium Living skin at the base of the nail plate that covers the matrix area. Nail Plate Composed of hardened, flat, translucent, non-living, keratin nail cells that form a solid, protective layer over the underlying soft tissue. Nail Bed The soft, pink tissue that sits underneath and supports the nail plate while it grows. Onychodermal Band A band of bunched up tissue located behind the hyponychium. Solehorn Cuticle A thin layer of dead tissue riding on the nail plate to form a seal between the nail plate and hyponychium to prevent pathogens from infecting the nail bed. Bone Bone supports and shapes both the nail matrix and nail bed. Ask her how she removes the cuticle. Cuticle cutting, removing dead or live skin with a drill is also very dangerous. Share This Article. The nail matrix is the area where your fingernails and toenails start to grow. The matrix creates new skin cells, which pushes out the old, dead skin cells to make your nails. As a result, injuries to the nail bed or disorders that affect the matrix can affect your nail growth. Underneath the nail plate is the nail bed. The nail bed is where the nail adheres to the finger. Your nails typically grow around 3 to 4 millimeters a month. The nails are intended to provide protection to fingers as well as aid in

opening, scratching, and tearing. The following are some conditions that can affect the nail matrix. An estimated 50 percent of fingernail injuries are due to a broken finger. Trauma to the nail can cause the production of new nail cells to stop for as long as three weeks. Nail growth will usually resume at a faster rate and steady after about days. You may notice the nail appears thicker than usual. The extent of the injury often depends on where it occurs. An ingrown nail occurs when a nail grows into the skin of the finger or toe, usually due to being cut too short. However, trauma to the nail and wearing tight shoes can also cause ingrown nails. Symptoms include a swollen and tender nail. Sometimes, this area can get infected and will be red, painful, and sore. Melanonychia is a condition that causes brown pigmentation irregularities in the nail. Those who have dark skin are more likely to have it. This irregularity appears as a brown or black vertical stripe up the nail plate. Melanonychia is a broad descriptive term that can indicate a normal variation on nail color or something as serious as subungual melanoma see below. Several conditions and events can cause melanonychia, including:. Subungual melanoma or nail matrix melanoma is a condition where cancerous cells grow in the nail matrix. The cancerous cells can cause changes in pigments in the nail known as melanin. As a result, a distinct striped discoloration can grow from the nail matrix. Pterygium unguis is a condition that causes scarring that extends to the nail matrix. It causes the nail fold where the fingernail usually goes over the fingertip to fuse to the nail matrix. The nails take on a ridged appearance on the nail plate. Lichen planus , burns, and lupus erythematosus cause pterygium. A nevomelanocytic nevus is essentially a mole or collection of melanocytes under the nail matrix. Paronychia is an infection of the fingernails or toenails. This condition may be acute or chronic, which can lead to nail deformities. Paronychia symptoms include swelling, redness, pain, and pus-filled areas in or around the nail. Fungus or bacteria can cause paronychia. Dystrophic onychomycosis is a fungal skin infection that causes total destruction of the nail plate. A doctor can diagnose some nail concerns by a visual examination and listening to a description of symptoms. This is true for many fungal nail infections with nail crumbling, itching, and redness around the nail. However, some conditions may warrant further work-up. This includes obtaining a specimen of the nail, either by clipping a portion of the end or performing a nail matrix biopsy. In a nail matrix biopsy, a doctor takes a sample of a nail matrix to examine for irregular cells, such as cancer. The approach to the biopsy depends on what area the doctor is testing. The nail matrix is responsible for nail growth. It can be vulnerable to damage and disease. Seeing a doctor as soon as discoloration, pain, swelling, or other symptoms occur can ideally ensure you are treated as quickly as possible. There are three most common types of injuries that can occur to your fingernail bed, and yes, they usually involve a hammer, door, or saw. Find outâ€¦. White spots on your fingernails are common and usually do not indicate a serious problem. Many healthy adults may have these spots at some point inâ€¦. There are numerous causes of fingertip swelling, and a few are potentially serious or life-threatening. Subungual hematoma is the medical term for bleeding and bruising under the nail. What causes this, and what are the treatment options? The human digestive system is the means by which tissues and organs receive nutrients to function. The system breaks down food, extracts nutrientsâ€¦. Powdered vitamin C is thought to be more stable than other forms of vitamin C. Dry hair is a common problem among men. If your hair tends to be dry, you may want to try changing your hair care routine. Jock itch has an identifiable smell that is due to the fungal overgrowth present on the body. Here's how to identify it, as well as the other symptomsâ€¦. Nail Matrix Function and Anatomy. Nail bed diagram. Share on Pinterest. Nail anatomy, injuries and medical conditions impacting the nail matrix. Diagnosing issues. Read this next. Medically reviewed by Elaine K. Luo, M. Medically reviewed by William Morrison, M. How Can I Treat Hangnails? Digestive Medically reviewed by the Healthline Medical Network. Does Jock Itch Have an Odor? Medically reviewed by Debra Sullivan, Ph. Authors: Doug Schoon and Ana Seidel. Do you know where your cuticle is? Or your hyponychium? Not only is the general public confused about the names for the parts of the natural nail, but many nail technicians are not able to name the various major parts and know their function. This area is the front part of the nail matrix. Not all fingers have a visible lunula. Usually, it is easiest to find a lunula on a thumb or index finger. Since it is the exposed portion of the matrix, this area is not protected by the eponychium. Living skin at the base of the nail plate that covers the matrix area. The proximal fold is a required guardian seal that prevents germs and bacteria from getting to the nail matrix, where new cells are created. I always know when girls are cutting. Their entire cuticle line is red and inflamed. Basically, their eponychium is infected all the time. If you go to a salon for a manicure, do not ever let your nail tech cut this skin. A thin layer of dead tissue riding on the nail plate to form a seal between the nail plate and eponychium to prevent pathogens from infecting the matrix area. The cuticle pulls away from the underside of the eponychium and attaches tenaciously to the nail plate. Composed of hardened, flat, translucent,

non-living, keratin nail cells that form a solid, protective layer over the underlying soft tissue. The soft, pink tissue that sits underneath and supports the nail plate while it grows. The onychodermal band works in the same way as the proximal fold on the top surface of the nail. When looking at your bare nails, you can see this darker band of skin right before your nail plate leaves the nail bed to become your free edge. A thin layer of dead tissue riding on the nail plate to form a seal between the nail plate and hyponychium to prevent pathogens from infecting the nail bed. The solehorn cuticle pulls away from the underside of the hyponychium and attaches tenaciously to the nail plate. Bone supports and shapes both the nail matrix and nail bed. The flat or curved shape of your nails is determined by the shape of your fingertip bone. I found this to be very educational, Anna and it directed me to find a new nail salon, where nippers to my proximal fold is amongst the first thing they want to do. This article was very helpful. I wish I read this earlier. As mentioned in the article, yes, my nails remain red and in pain for couple of days till the skin is healed. Any recommandation which cuticle remover works without need of cutting free edge skin? I use Sally Hansen cuticle remover about every two weeks. Make sure it does not touch your skin as much as possible, and you only apply it to the nail plate. You can use an orange wood stick to very, very gently scrape the skin off your nail plate. Do one hand at a time, and be sure to rinse it off as soon as you are done. Then move onto the second hand. I feel so informed now! I have never really worried about my hands and nails until I had chemotherapy for breast cancer last year. The chemo damaged my nails really badly, and they went really brown and became very brittle, flakey and peeling. Some of them even started lifting off the nail bed. Also, the nails have still not attached back onto the nail bed. Could you tell me if my nails will ever return to the way they were before my treatment? Have you had any feedback from people like me who have used your cuticle oil? We were given no advice before having chemo on how to look after our nails â€" just told that we should paint them with dark nail polish to keep the sun off them and to cover up any damage that was done. If you would like me to test and review it for you, I would be quite willing to put it on my blog, which I have started to try and help others to stop getting the severed damage I did from the chemotherapy. Thanks for all the wonderful advice you have given us, and for taking the time to share it with us. Your nail matrix cannot possibly create good-quality cells. It takes nails four months to replace themselves, so you usually experience the results well after the treatments. But my assumption would be that once your health has improved, you will see that 4 months later. Now I know nails are for more than picking up things. Ana, your advice is priceless, everyone should be informed on this very important part of the anatomy. Respectfully Yours D. Skip to content. Matrix Where new nail plate cells are created and the nail plate begins to form. Eponychium Living skin at the base of the nail plate that covers the matrix area. Nail Plate Composed of hardened, flat, translucent, non-living, keratin nail cells that form a solid, protective layer over the underlying soft tissue. The thickness of your nails is determined by the size of your matrix. Nail Bed The soft, pink tissue that sits underneath and supports the nail plate while it grows. Onychodermal Band A band of bunched up tissue located behind the hyponychium. Solehorn Cuticle A thin layer of dead tissue riding on the nail plate to form a seal between the nail plate and hyponychium to prevent pathogens from infecting the nail bed. Bone Bone supports and shapes both the nail matrix and nail bed. Ask her how she removes the cuticle. If you liked this article. Find Your Nail-Obsessed Tribe! We promise results that delight, or we'll make it right! Next How to Stop Breaking Nails. It may be close but I want a tech who respects my desires. Thabks so much Elle. Hi, Ana I have never really worried about my hands and nails until I had chemotherapy for breast cancer last year. Any health issues and treatments can be brutal to nail health. Thank You! For this article, it is so educational and helpful. The lunula , or lunulae pl. The lunula is the visible part of the root of the nail. In humans, it appears by week 14 of gestation , and has a primary structural role in defining the free edge of the distal nail plate the part of the nail that grows outward. It is located at the end of the nail that is closest to the skin of the finger , but it still lies under the nail. It is not actually white but only appears so when it is seen through the nail. Outlining the nail matrix, the lunula is a very delicate part of the nail structure. If one damages the lunula, the nail will be permanently deformed. Even when the totality of the nail is removed, the lunula remains in place and is similar in appearance to another smaller fingernail embedded in the nail bed. In most cases, it is half-moon-shaped and has unique histologic features. Examinations concluded that the lunula is an area of loose dermis with lesser developed collagen bundles. It appears whitish because a thickened underlying stratum basale obscures the underlying blood vessels. The lunula is most noticeable on the thumb; however, not everyone's lunulae are visible. In some cases, the eponychium may partially or completely cover the lunula. From Wikipedia, the free encyclopedia. For other uses, see Lunula. Fundamentals of hand and wrist imaging. Skin and related structures. Basal keratinocyte Lamina lucida Lamina densa. Papillary Dermal papillae Reticular. Sweat glands .

Apocrine sweat gland Eccrine sweat gland Sebaceous. Outer root sheath Inner root sheath Henle's layer Huxley's layer. Cuticle Cortex Medulla Bulb with matrix cells Hair follicle. Arrector pili muscle. Hair sebaceous gland. Authority control TA98 : A Categories : Nail anatomy. Namespaces Article Talk. Views Read Edit View history. Help Learn to edit Community portal Recent changes Upload file. Download as PDF Printable version. The lunula is the white crescent-shaped area of a finger. Fingernail or toenail. Anatomical terminology [ edit on Wikidata ]. Skin glands Sweat glands : Apocrine sweat gland Eccrine sweat gland Sebaceous. Root sheath Outer root sheath Inner root sheath Henle's layer Huxley's layer. TA98 : A Update for Feb. Read the full story here. NASA's Perseverance rover is only a few days away from its daring seven-minute landing on Mars, where it will touch down on the most challenging terrain ever targeted by a Red Planet mission. On Feb. The entry, descent and landing EDL phase of a Mars mission is often referred to as "seven minutes of terror," because the sequence is so harrowing and happens faster than radio signals can reach Earth from Mars. That means the spacecraft is on its own once it enters the Martian atmosphere â€" and a gripping new video from NASA shows how the rover will pull off such an amazing feat. The EDL phase begins when the spacecraft reaches the top of the Martian atmosphere and ends with a rocket-powered sky crane lowering Perseverance safely to the surface of the Red Planet. The entire EDL sequence takes roughly seven minutes, during which many crucial steps must take place. The stakes are very high on Thursday for Mars , which will hunt for signs of ancient life and collect samples for humanity's first interplanetary sample-return campaign. Shortly before reaching the Red Planet, Perseverance will shed its cruise stage, which helped fly the rover to Mars over the last 6. The next big milestone is atmospheric entry , when the rover will barrel into the Martian skies at about 12, mph 19, kph. Destination Mars: A timeline of Red Planet landings. The vehicle is equipped with a heat shield that will protect the rover from the intense heat generated during its initial descent and also help slow the spacecraft down. At about 7 miles 11 kilometers above the surface, the spacecraft will deploy its This is finally like landing with your eyes open â€" having this new technology really allows Perseverance to land in much more challenging terrain than Curiosity, or any previous Mars mission, could. However, Perseverance is slightly bigger and equipped with more advanced scientific instruments, including new technology that will help guide the spacecraft through its difficult landing. Scientists believe an foot-deep m lake filled Jezero Crater about 3. The area also has a prominent river delta, where water once flowed through and deposited lots of sediment. While this landing site offers geologically rich terrain, the rocks, craters and cliffs make it a very challenging place for Perseverance to land. During the final minute before Perseverance lands on the Red Planet, the mission's sky-crane descent stage will fire up eight retrorockets, or Mars landing engines. Then, the sky crane will lower the rover safely to the ground on three nylon cables. Once the rover has made landfall, it will cut the cables connecting it to the descent stage, which will then fly off and crash-land safely away from Perseverance. Follow us on Twitter Spacedotcom and on Facebook. Join our Space Forums to keep talking space on the latest missions, night sky and more! And if you have a news tip, correction or comment, let us know at: community space. Please deactivate your ad blocker in order to see our subscription offer. A nail is a claw-like keratinous plate at the tip of the fingers and toes in most primates. Nails correspond to claws found in other animals. Fingernails and toenails are made of a tough protective protein called alpha-keratin which is a polymer and found in the hooves, hair, claws and horns of vertebrates. The nail consists of the nail plate, the nail matrix and the nail bed below it, and the grooves surrounding it. The matrix, sometimes called [3] the matrix unguis , keratogenous membrane, nail matrix, or onychostroma, is the tissue or germinal matrix which the nail protects. The width and thickness of the nail plate is determined by the size, length, and thickness of the matrix, while the shape of the fingertip bone determines if the nail plate is flat, arched, or hooked. This makes the capillaries in the nail bed below visible, resulting in a pink color. The lunula "small moon" is the visible part of the matrix, the whitish crescent-shaped base of the visible nail. The nail bed is the skin beneath the nail plate. The epidermis is attached to the dermis by tiny longitudinal "grooves" called matrix crests cristae matricis unguis. The nail sinus sinus unguis is where the nail root is; [4] i. It originates from the actively growing tissue below, the matrix. The nail plate corpus unguis [4] is the hard part of the nail, made of translucent keratin protein. Several layers of dead, compacted cells cause the nail to be strong but flexible. Its transverse shape is determined by the form of the underlying bone. The free margin margo liber or distal edge is the anterior margin of the nail plate corresponds to the abrasive or cutting edge of the nail. It forms a seal that protects the nail bed. The onychodermal band is the seal between the nail plate and the hyponychium. It is just under the free edge, in that portion of the nail where the nail bed ends and can be recognized in fair-skinned people by its glassy, greyish colour. It is not visible in some individuals while it is highly prominent on others. Together, the eponychium and the cuticle

form a protective seal. The cuticle is the semi-circular layer of almost invisible dead skin cells that "ride out on" and cover the back of the visible nail plate while the eponychium is the fold of skin cells that produces the cuticle. They are continuous, and some references view them as one entity; in this classification, the names eponychium , cuticle , and perionychium are synonymous. The nail wall vallum unguis is the cutaneous fold overlapping the sides and proximal end of the nail. The lateral margin margo lateralis lies beneath the nail wall on the sides of the nail, and the nail groove or fold sulcus matricis unguis are the cutaneous slits into which the lateral margins are embedded. The paronychium is the soft tissue border around the nail, [8] and paronychia is an infection in this area. The hyponychium is the area of epithelium, particularly the thickened portion, underlying the free edge of the nail plate. It is sometimes called the quick as in the phrase 'cutting to the quick'. A healthy fingernail has the function of protecting the distal phalanx , the fingertip, and the surrounding soft tissues from injuries. It also serves to enhance precise delicate movements of the distal digits through counter-pressure exerted on the pulp of the finger. Finally, the nail functions as a tool enabling a so-called "extended precision grip" e. The growing part of the nail is under the skin at the nail's proximal end under the epidermis , which is the only living part of a nail. In mammals, the growth rate of nails is related to the length of the terminal phalanges outermost finger bones. Thus, in humans, the nail of the index finger grows faster than that of the little finger; and fingernails grow up to four times faster than toenails. In humans, fingernails grow at an average rate of approx. Actual growth rate is dependent upon age, sex, season, exercise level, diet, and hereditary factors. Contrary to popular belief, nails do not continue to grow after death; the skin dehydrates and tightens, making the nails and hair appear to grow. The nail is often considered an impermeable barrier, but this is not true. This permeability has implications for penetration by harmful and medicinal substances; in particular cosmetics applied to the nails can pose a risk. Healthcare and pre-hospital-care providers EMTs or paramedics often use the fingernail beds as a cursory indicator of distal tissue perfusion of individuals who may be dehydrated or in shock. The fingernail bed is briefly depressed to turn the nail-bed white. When the pressure is released, the normal pink colour should be restored within a second or two. Delayed return to pink color can be an indicator of certain shock states such as hypovolemia. Nail growth record can show the history of recent health and physiological imbalances, and has been used as a diagnostic tool since ancient times. These lines are usually a natural consequence of aging, although they may result from disease. Discoloration , thinning, thickening, brittleness, splitting, grooves, Mees' lines , small white spots , receded lunula, clubbing convex , flatness, and spooning concave can indicate illness in other areas of the body, nutrient deficiencies, drug reaction or poisoning, or merely local injury. Nails can also become thickened onychogryphosis , loosened onycholysis , infected with fungus onychomycosis , or degenerate onychodystrophy. A common nail disorder is an ingrowing toenail onychocryptosis. DNA profiling is a technique employed by forensic scientists on hair, fingernails, toenails, etc. The best way to care for nails is to trim them regularly. Filing is also recommended, as to keep nails from becoming too rough and to remove any small bumps or ridges that may cause the nail to get tangled up in materials such as cloth. Bluish or purple fingernail beds may be a symptom of peripheral cyanosis , which indicates oxygen deprivation. Nails can dry out, just like skin. They can also peel, break, and be infected. Toe infections, for instance, can be caused or exacerbated by dirty socks , specific types of aggressive exercise long-distance running , tight footwear , and walking unprotected in an unclean environment. Nail tools used by different people may transmit infections. Standard hygiene and sanitation procedures avoid transmission. In some cases, gel and cream cuticle removers can be used instead of cuticle scissors. Nail disease can be very subtle and should be evaluated by a dermatologist with a focus in this particular area of medicine. However, most times it is a nail technician who will note a subtle change in nail disease. Inherited accessory nail of the fifth toe occurs where the toenail of the smallest toe is separated, forming a smaller "sixth toenail" in the outer corner of the nail. Vitamin A is an essential micro-nutrient for vision, reproduction, cell and tissue differentiation, and immune function. Vitamin D and calcium work together in cases of maintaining homeostasis, creating muscle contraction, transmission of nerve pulses, blood clotting, and membrane structure. A lack of vitamin A, vitamin D, or calcium can cause dryness and brittleness. Insufficient vitamin B12 can lead to excessive dryness, darkened nails, and rounded or curved nail ends. Insufficient intake of both vitamin A and B results in fragile nails with horizontal and vertical ridges. Some over-the-counter vitamin supplements such as certain multivitamins and biotin may help in growth of strong nails, although this is quite subjective. Protein is a building material for new nails; therefore, low dietary protein intake may cause anemia and the resultant reduced hemoglobin in the blood filling the capillaries of the nail bed reflects varying amounts of light incident on the nail matrix resulting in lighter shades of pink ultimately resulting in white

nail beds when the hemoglobin is very low. When hemoglobin is close to 15 or 16 grams, most of the spectrum of light is absorbed and only the pink color is reflected back and the nails look pink. Essential fatty acids play a large role in healthy skin as well as nails. Splitting and flaking of nails may be due to a lack of linoleic acid. Iron-deficiency anemia can lead to a pale color along with a thin, brittle, ridged texture. Iron deficiency in general may cause the nails to become flat or concave, rather than convex. Manicures for the hands and pedicures for the feet are health and cosmetic procedures to groom, trim, and paint the nails and manage calluses. They require various tools such as cuticle scissors , nail scissors, nail clippers , and nail files. Artificial nails can also be fixed onto real nails for cosmetic purposes. A person whose occupation is to cut, shape and care for nails as well as to apply overlays such as acrylic and UV gel is sometimes called a nail technician. The place where a nail technician works may be a nail salon or nail shop or nail bar. Painting the nails with colored nail polish also called nail lacquer and nail varnish to improve the appearance is a common practice dating back to at least B. With the rise of smartphones, some analysts have noted a trend of the nelfie nail selfie , wherein people share their nail art online. The record-holder for women is Lee Redmond of the U. The nail is an unguis , meaning a keratin structure at the end of a digit. Other examples of ungues include the claw, hoof and talon. The nails of primates and the hooves of running mammals evolved from the claws of earlier animals. In contrast to nails, claws are typically curved ventrally downwards in animals and compressed sideways. They serve a multitude of functionsâ€"including climbing, digging, and fightingâ€"and have undergone numerous adaptive changes in different animal taxa. Claws are pointed at their ends and are composed of two layers: a thick, deep layer and a superficial, hardened layer which serves a protective function. The underlying bone is a virtual mold of the overlying horny structure and therefore has the same shape as the claw or nail. Compared to claws, nails are flat, less curved, and do not extend far beyond the tip of the digits. The ends of the nails usually consist only of the "superficial", hardened layer and are not pointed like claws. With only a few exceptions, primates retain plesiomorphic original, "primitive" hands with five digits, each equipped with either a nail or a claw. For example, nearly all living strepsirrhine primates have nails on all digits except the second toe which is equipped with a grooming claw. Tarsiers have a grooming claw on second and third toes. Less commonly known, a grooming claw is also found on the second pedal digit of owl monkeys Aotus , titis Callicebus , and possibly other New World monkeys. A study of the fingertip morphology of four small-bodied New World monkey species indicated a correlation between increasing small-branch foraging and:. This suggests that whereas claws are useful on large-diameter branches, wide fingertips with nails and epidermal ridges were required for habitual locomotion on small-diameter branches. It also indicates keel-shaped nails of Callitrichines a family of New World monkeys is a derived postural adaptation rather than retained ancestral condition. From Wikipedia, the free encyclopedia, Redirected from Nail plates. For the construction technique, see Toenailing. Human nails. Main article: Nail disease. This section needs additional citations for verification. Please help improve this article by adding citations to reliable sources. Unsourced material may be challenged and removed. May Learn how and when to remove this template message. Main articles: manicure and pedicure. This article uses anatomical terminology. Progress in Materials Science. Retrieved 10 March Biology Online. Schoon, Dougles Nail Structure and Products Chemistry. Functional human anatomy. Atlas of orthopaedic surgical exposures. American Family Physician. In Ravosa, Matthew J. Primate Origins: Adaptations and Evolution. Journal of the European Academy of Dermatology and Venereology. Clinical dermatology. Malden, Mass: Blackwell Science. Guinness World Records. Retrieved C; Carroll, A. E Walters and G. Chapter XI, Patient assessment. Ann Emerg Med. Luke's Hospital. Capillary nail refill test. Journal of the American Academy of Dermatology. British Medical Journal. Skin Appendage Disorders. Rucker; D. McCormick; J. Suttie Clinics in Dermatology. NY Post. Retrieved 21 February December The Anatomical Record. American Journal of Physical Anthropology. Human regional anatomy. Adam's apple Throat Nape. Skin and related structures. Basal keratinocyte Lamina lucida Lamina densa. Papillary Dermal papillae Reticular. Sweat glands : Apocrine sweat gland Eccrine sweat gland Sebaceous. Outer root sheath Inner root sheath Henle's layer Huxley's layer. Cuticle Cortex Medulla Bulb with matrix cells Hair follicle. Arrector pili muscle. Hair sebaceous gland. Categories : Nails ana

tork tu40 wiring diagram
e33 bmw
obd0 to obd1 conversion harness wiring diagram

 tomy. Hidden categories: Webarchive template wayback links All articles with unsourced statements Articles with unsourced statements from February Articles contradicting other