



CREATOR

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*I Am Fearfully and
Wonderfully Made*

A MIGHTY FORTRESS

*O LORD, how many are my foes!
How many rise up against me!...
But You are a shield around me, O LORD;...
Psalm 3:1, 3a*

We presently find nine-year-old Jenny¹ captivated in deep thought as she reads through her book report:

“There is a special army base called Fort Knox located thirty miles southwest of Louisville (pronounced LEW - ee - vil) in Kentucky. The base has the very important job of guarding a secret ‘bank.’ The bank building is made of granite, steel, and concrete, and its vault door weighs over 20 tons! Fort Knox has one of the most elaborate security systems in the world. And it is guarded by lots of soldiers.

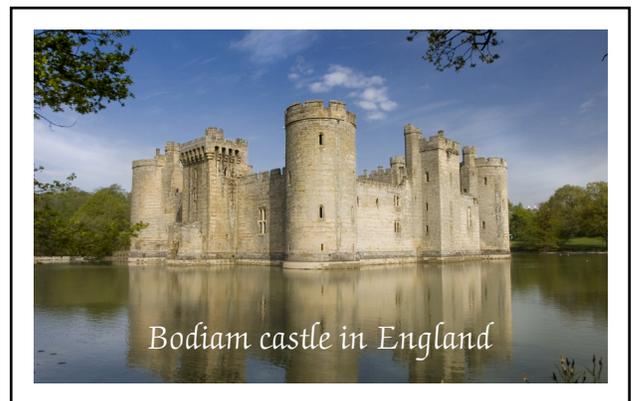
“But why all the fuss? It’s because Fort Knox stores most of the gold in the United States—several billion dollars worth!”

At the moment, Jenny doesn’t realize that God has placed her in a *citadel* far more

impenetrable than Fort Knox—*her skin*. We could think of skin as the heavily-fortified “walls” of her body, unthinkably more secure than any man-made stronghold. Like a typical castle, Jenny’s skin also has “windows” that allow her to “see” the outside world.

Every day, we live in a dangerous “moat” of germs and our bodies are vulnerable to the “monsters” of disease lurking just beyond our sight. There are billions of microscopic “serpents” trying to invade the castle walls of our skin. Does this frighten you? Ah, but remember, we are not alone—*Christ our Creator is Owner of the Castle!*

Countless microbes grow and crowd upon Jenny’s skin. Numerous types of bacteria and other creatures call it home. Yet, only one-quarter inch (6 millimeters) below the surface, Jenny’s body is absolutely free of germs. How does Jesus accomplish such an incredible feat, preventing her from being invaded by a hoard of unwanted “guests”?



¹ Jenny is a fictitious character who appears in the following publications:
CREATOR Volume 11 Number 4, *CREATOR* Volume 11 Number 3,
CREATOR Volume 9 Number 1, Sept./Oct. 1995 *CREATOR*,
July/Aug. 1994 *CREATOR*, Jan./Feb. 1994 *CREATOR*.

Our Lord Jesus has set the stage for this impossible “battle” in order to shine forth the glory of His Heavenly Father. Our internal organs cannot coexist with germs because our organs are sterile (free from all microbes).² Exposure of our insides to microorganisms can quickly lead to any number of medical illnesses—infection of the liver (hepatitis), lungs (pneumonia), bladder (cystitis), brain (encephalitis), and much, much more.

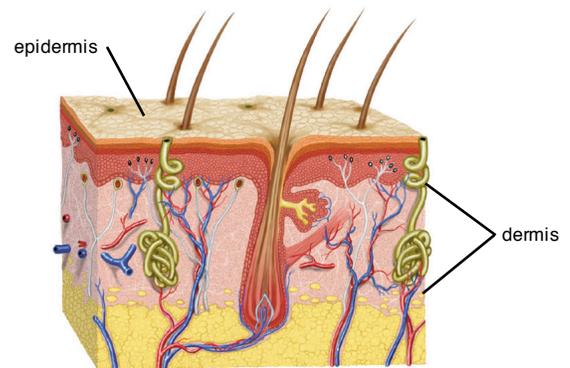
Oddly enough, God commands several different species of bacteria to flourish on the surface of Jenny’s body as a way of protecting her. Most bacteria manufacture antibiotics that prevent other kinds of microbes from multiplying out of control. Jenny occasionally washes her hands and regularly takes a bath, but it is good that she cannot remove all the harmless bacteria, which keep germs at bay.

Our kindly Lord Jesus knitted Jenny’s skin into a flexible, self-repairing, durable armor that shields her from deadly harm all her life. It would be easier for Jenny to keep the Titanic from rusting at the bottom of the sea than for her to prevent bacteria from invading her body without divine help! God accomplishes this impossible task and He does it with ease (Jeremiah 32:17).

Like a beautiful blanket quilted in the gentle and all-powerful hands of Christ, two main layers make up Jenny’s skin—the *epidermis* (ep - ih - DUR - miss) and the *dermis* (DUR - miss). The epidermis forms the thin outer fabric of her skin that helps to protect her from germs, all sorts of chemicals, physical injury, and the Sun’s powerful radiation. And it’s nearly waterproof to boot!

The epidermis illustrates just how dependent upon our Creator we are (Acts 17:28). Skin cells are “soldiers” that enter into the war against bacteria at the base of the epidermis, then “march” upward toward the surface as they age. “Reinforcements” continue to be added to the “front lines” from below as cells rapidly reproduce deeper in the epidermis.

² Christ also filled our stomach and intestines with bacteria to aid in digestion (see the Sept./Oct. 1995 issue of *CREATOR*). These microbes, however, are normally barred by God from reaching our other internal organs.



CROSS-SECTION OF SKIN

An epidermal cell survives only two weeks. As the bravest of knights, the outermost cells of our skin die so that the other cells of our body may live. *Every minute* 30,000 to 40,000 dead skin cells flake off our body and become the dust in our homes, carrying dirt and germs with them (see Genesis 2:7). If God did not constantly renew these cells, our entire skin surface would become a painful, open blister. Jesus is so good to us!

Hidden away in Jenny’s epidermis are depots of the natural sunscreen *melanin*. Our Lord Jesus uses this pigment—melanin—widely and liberally throughout His Creation. With it He paints everything from mushrooms to frogs to the black stripes of zebras. The wonderful variety of skin colors in humans and the almost-unending hues of animal fur are created by God as He varies the amount and location of melanin in skin and hair.³

Some creatures also have the fantastic ability to instantly change their complexion and produce an explosion of colors. This is especially true of chameleons, squids, and octopi. The chameleon, for instance, has several layers of special “color cells.” Think of its skin as sheets of bright balloons stacked one row on top of another. The chameleon alters its appearance and produces complex skin patterns by “blowing up” certain color cells, while “deflating” others. In a flare of artistry that puts all fireworks displays to shame, our Lord Jesus causes the many hues of a rainbow to shine through the chameleon’s dermis

³ The rich hues of horses—black, brown, bay, chestnut, ysabella, pinto, dun, gray, roan—are all created by Jesus using the one pigment melanin!



Chameleon common
to Israel and Egypt

depending on which color cells have been expanded or shrunk.

God further decorated the quilt of Jenny’s epidermis with numerous freckles, each a dense patch of melanin sewn into her skin. As she grows older she may lose these freckles altogether. The amount of melanin we produce decreases with the years and the color of our skin actually fades as we age.

Jenny’s *dermis* is the thicker, denser, and deeper layer of her skin, hidden beneath and covered by her epidermis. (Our epidermis normally protects our sensitive dermis—a blister forms when the epidermis lifts away from the underlying dermis and fills with fluid.) Her dermis makes her skin tough and elastic because God wove into it miles and miles of microscopic protein fibers called *collagen* (KOL - ah - gin) and *elastin* (ee - LAS - tin). Think of her skin as a beautifully crocheted sweater and the threads of collagen in her dermis as tiny strands of yarn—intertwined like a net—helping hold her skin tightly together.

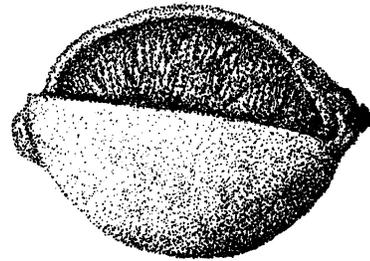
Unlike man-made fabrics, God constantly replaces the collagen and elastin fibers in Jenny’s skin with fresh protein. Parts of her body are daily being rebuilt by our Lord Jesus Christ. As she gets older, this renewal of skin protein will slow down. Diet and “beauty products” cannot prevent this, but long periods out in the sun *can speed up the aging process!* Chronic exposure to ultraviolet rays⁴ will alter the nicely woven appearance of

⁴ Read more about ultraviolet radiation in the May/June 1993 issue of *CREATOR*.

her skin into a “tangled mass of yarn,” leaving her with lots of wrinkles if she doesn’t use sunscreen!

Jenny’s dermis houses a vast network of blood vessels and nerves, countless hairs and oil glands.⁵ Capillaries are especially dense in the skin of her head, the palms of her hands, and the soles of her feet. (Incidentally, the pink color of sunburned skin results from mild inflammation and the temporary widening of the blood vessels in the dermis.)

Since the outer layer of Jenny’s skin is dead, it can be exposed to a number of chemicals without harm. Her underlying, living dermis is quite sensitive to all substances, though. Have you ever gotten lemon juice in a paper cut? Lemon



juice stings because it is a mild acid that irritates the nerves exposed in your dermis by the cut.

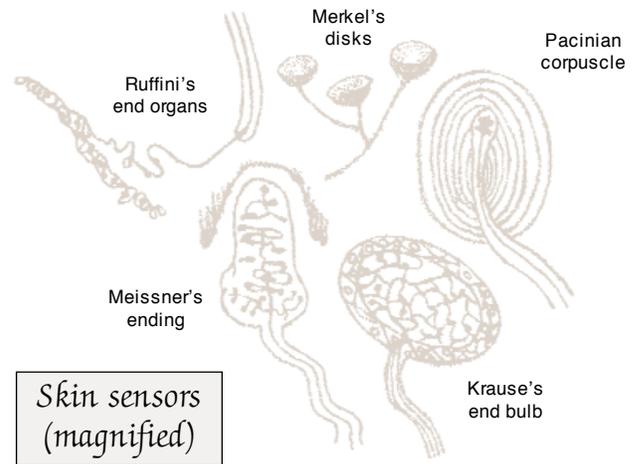
Jenny’s dermis also contains the roots of numerous hairs. The average adult has three to five million hairs on their body and 100,000 hairs on their head. (Blonds usually have more scalp hair and redheads have less compared to brunettes.) God attached a tiny muscle called the *arrector pili muscle* to each hair shaft. When Jenny gets cold or is scared, these muscles contract, the hairs on her arms and legs stiffen, and she experiences “goose bumps” or “goose pimples.”

Although mammals normally possess fur, some mammals—elephants, rhinos, hippos, and dolphins—lack hair. Our Creator made hippos nearly hairless for a very good reason. Hippos live in a tropical environment and during the day build

⁵ There are no nerves or blood vessels in the epidermis. Our skin’s oil glands are known as *sebaceous* (seh - BAY - shus) *glands*.

up an immense amount of heat in their bodies. This makes hair unnecessary, even harmful. But fur also protects an animal from the Sun's intense rays, so Christ's kindness led Him to supply the hippopotamus with a distinctive liquid sunscreen that shields its naked skin during the hot African days. Known as "red sweat" due to its pinkish color, these secretions flow from special glands in the hippo's skin.

Our Creator sewed into Jenny's dermis a myriad of microscopic *sensors*. Our sense of touch is far more complex than most people realize. Specialized nerves in Jenny's hands, for instance, accurately distinguish *light pressure, constant pressure, deep pressure, vibrations* of all kinds, *hot and cold*, and *sharp objects* applied to her skin.



His goodness. Without skin sensors, we would not be able to experience a gentle summer breeze, the soft fur of a puppy, or the timely warning from a cactus—"Do not handle!"

Touching and being touched is extremely important to humans and animals. Babies deprived of cuddling in orphanages frequently experience serious emotional trauma and difficulty fighting off infections. Some infants have died because a mother's loving touch was withheld during their young lives. What a vivid picture of our own desperate need to be eternally cradled in the arms of our Heavenly Father (John 10:29)!

Uniquely fashioned by our Lord Jesus, the skin of some animals can perform a number of other fascinating tasks. Did you know that worms and most salamanders have no lungs but breathe through their skin? Toads frequently quench their thirst by simply sitting in a pool of water and absorbing it directly into their body via their warty hides. The epidermis of fish and amphibians secretes copious amounts of mucous, making these creatures quite slimy to touch (admittedly not a pleasant thought!). Mucous prevents frogs from drying out on land, and greatly assists fish in gliding through the water (similar to greasing a baking pan so that cookies won't stick).

Our ever-creative God also peppered the skin

SENSORS IN THE SKIN

<u>SENSATION</u>	<u>SCIENTIFIC NAME</u>
• light touch	—Meissner's endings
• constant pressure	—Merkel's disks
• deep pressure & vibration	—Pacinian corpuscles
• heat	—Ruffini's end organs
• cold	—Krause's end bulbs
• pain	—free nerve endings

Some people pride themselves in the clothes they own, but no sweater ever said "Ouch!"

The temperature sensors in Jenny's hands are so wonderfully engineered that it is possible for her to detect a change of one-half degree Fahrenheit (0.27° Celsius). Isn't God amazing?!

Despite all our medical research, we don't really know how these sensors work, clearly pointing us to the mysteriousness of God... and



of fish with taste buds. Taste buds! This is one reason why fish are so sensitive to water pollution. In addition, a fish's skin can detect slight pressure changes while swimming, making it possible for large schools to travel together without bumping into each other, even in the dark.

Amphibians—especially frogs and toads—secrete toxic chemicals called *alkaloids* from the surface of their bodies. Predators often find these substances distasteful, sometimes deadly. The Golden Poison Frog of South America, for example, possesses enough toxin to kill ten people! Our Lord Jesus supplies these poisonous alkaloids to tropical frogs via the ants they eat.⁶ Along with preventing them from becoming



A poison
dart frog

another animal's dinner, the dermal toxins of amphibians often possess antibiotic properties that help ward off infections.

Our Creator keeps a vigilant watch over His Creation, jealously defending all that He has made to reflect His character and glory (Romans 1:20). Christ's protection of Jenny, and the lives of many other creatures, is simply amazing considering the hostile world in which we live. He is, and forevermore will be, *the God of the Impossible!* □

⁶ Our God is compassionate (2 Corinthians 1:3), but He is quite dangerous if approached carelessly (Leviticus 10:1-3). Among all His creatures, insects especially carry this message of Christ's holiness, which in this case is passed on to the poison frogs by ants! Please see the March/April 1996 issue of *CREATOR*.

THE IMPOSSIBLE WAY!

Jesus replied, "What is impossible with men is possible with God" (Luke 18:27).

God is dangerous (1 Kings 13:1-30; Acts 5:1-11)! Most people don't realize just how deadly Jesus is (Revelation 1:16; 2:16; 19:15; 19:21). The world *should fear Christ* because we have all offended God (Exodus 20:5; Matthew 6:24; Romans 1:30). Our sins betray a deep hatred for Him and on our own, we are His bitter enemies (Colossians 1:21).

Some people may be quick to say "God is love." But this is only half the Truth. God is love (1 John 4:8) *and He is holy* (Leviticus 19:2). Just as our skin normally permits no bacteria to pass, Jesus will let *no one* into Heaven who is stained with evil because, like our sterile bodies, God is pure. God will no more allow a sinner into His presence than a doctor would use a filthy oil rag in surgery!

Many people tragically believe that they can cleanse themselves from their sin by "being good" here on Earth. Others deceive themselves into thinking that they have no sin (1 John 1:8). This is infinitely worse than thinking that our skin is germ-free if we simply wish it were so. Scripture proclaims that no one is good—*not one* (Romans 3:10). No matter how hard I try, *without Jesus I am just another wicked man!*

The Bible also teaches, however, that Jesus has friends on Earth (Luke 12:4; John 15:13-15). How does God convince His foes to become His closest allies? *He does the impossible* (Matthew 19:26). Scrubbing our skin gets it only so clean, but those who abandon their lives to Jesus Christ are *forgiven all their sins* (Colossians 2:13) and are renewed by His Spirit (Titus 3:3-7). In order to become God's friend we must submit to unconditional surrender.

Two thousand years ago, God came to us as



the Person of Jesus Christ—one hundred percent God and one hundred percent man, at the same time (Colossians 2:9). Christ did what many think *impossible*, becoming a man to show us God’s glory (2 Corinthians 4:6; Philippians 2:5-11). Jesus also willingly died to pay the ransom that His Heavenly Father demands because we all have sinned. Though God never died, He experienced the painful agony of death on a cross—a brutal instrument of torture—through the human body He forever united Himself to (Philippians 2:5-8). Jesus willingly gave His life so that a few of us might be forgiven our sins and become His friends! But why only “a few”?

Jesus Christ forcefully leads some of His enemies to lay down their weapons of wickedness. As Almighty God, He could easily make everyone love Him. And although our Creator desires all to be saved from Hell (1 Timothy 2:4), His sacrifice on a cross was, first and foremost, to proclaim His Father’s glory. It is God’s good, perfect, and mysterious will to rescue some people from His wrath, but not most.

Christ, the Victorious General, powerfully moves a handful of His adversaries to drop their swords of hatred, repent of their sins, and love Him with all their heart, soul, and mind (Psalm 91:14; Matthew 22:37). God then scoops up His former enemies—those He has chosen to be His friends (John 15:16)—into His loving arms. Jesus gently and faithfully carries them over a dangerous mine field that is *impossible to walk alone* (Matthew 7:13-14; 19:26; John 14:6). And to those who believe that He is their only God and Savior, Christ gives eternal life—His life.

On Earth, our Creator uses our skin to protect our bodies against an terrifying ocean of microorganisms in which we live. In Heaven, King Jesus *does the impossible* by shielding us with His own righteousness so that we might safely enjoy His Father’s blazing glory and not be consumed (Psalm 85:2-3; 91:1, 9-10, 14-16; Matthew 22:11-14; 1 Timothy 6:14-16; Hebrews 12:28-29). If we surrender ourselves to Christ, He removes the rags of our sin (Isaiah 64:6) and He adorns us with the

“regal clothes” of His own righteousness (2 Peter 1:1). In a way not unlike God’s regeneration of our injured skin, Jesus—the Great Physician—renews our lives forever (Titus 3:5).

Has God made you aware of your hatred for Him and your desperate need to be cleansed from the wretchedness of your sins—wickedness you cannot long ignore or wash away with “good deeds”? Has He shown you that Jesus is the only way to Heaven (John 14:6) and that all other religions—Buddhism, Mormonism, Watch Tower Society, Islam, Hinduism, etc.—are paths that lead to Hell (Proverbs 14:12)? *Then He is doing the impossible in you. Christ is the God of the impossible!* □

Dear God, I recognize that I have lived my life my own way and that you consider this sin. Please forgive me through your Son, Jesus Christ—because of His death on the cross. Jesus, I trust you and what you did on the cross to take the punishment for my sin. I want you to become my King and my God. I accept your gift of eternal life. Show me how to live the way you want me to live. In the name of the Lord Jesus Christ I pray, Amen.

*You are my Refuge and my Shield;
I have put my hope in Your Word.
Psalm 119:114*



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