

Envision a world in which everybody quit showering. Nauseating, right? But hold up. What in case that world was really way better for our wellbeing?

Accept it or not, after talking to microbiologists, dermatologists, and history specialists, creator James Hamblin has found that we may all be as well clean. Surely, we ought to still wash our hands to halt the spread of disease, particularly amid a widespread. However, our obsession with nearly clinical cleanliness might be compromising our resistant frameworks.

Why did we begin washing so completely, though? Like so numerous things, the rise of cleanser coincided with the birth of capitalism. About two centuries back, intelligent showcasing persuaded us that we were required to “fight germs.” Since that point, promoters have as it was developed more advanced at persuading us to purchase skincare items. They guarantee us cleanliness, wellbeing, and beauty.

However, doctors are just now realizing the significance of our skin's natural microbiome - the bacteria that reside on the exterior of our bodies.

A shifted microbiome is as of now known to be useful to our intestine wellbeing. Be that as it may, it is additionally advantageous to the skin. And in case you confine yourself with cleanser, you won't be able to create this diversity.

In this summary, you'll learn

- how cleanser companies were the primary to mix publicizing and excitement with things like cleanser musical dramas;
- why the Amish have such moo rates of sensitivities and asthma; and
- why dogs may well be able to identify illness based on changes in our skin microbiomes.

## Chapter 1 - Cutting-edge thoughts of “cleanliness” have driven us to overwash ourselves.

Five a long time sometime recently he begun composing Clean, creator James Hamblin stopped showering. He still washed his hands and every so often got his body damp, but something else, he jettisoned all individual care items. This was a portion of his “existential audit.” Hamblin had fairly cleared out his secure, well-paid work as a specialist to end up a writer, and he needed to undertake giving up certain propensities to spare cash and time.

It took many months for his body to get to be acclimated to the alter. And when it did, he noticed that his skin got to be less sleek which he presently had fewer skin inflammation breakouts. His smell wasn't that of a field of daisies, but, as his sweetheart put it, he presently noticed “like a person.”

Furthermore, he discovered that the majority of the skin analyzers he spoke with had a conservative attitude to bathing practices.

As medicine and technology advance, we are spending more time indoors and cleaning ourselves more frequently. Infectious diseases are considerably less likely to kill us. Chronic illness rates, on the other hand, have risen dramatically.

Some of these chronic illnesses might be connected to our habit of washing our hands and bodies too frequently. Eczema or atopic dermatitis is one example. It causes the skin to become red and irritated.

Patients with dermatitis flare-ups ought to maintain a strategic distance from hot showers and dispose of cleansers and gels, agreeing to Sandy Skotnicki, a dermatologist, and speaker at the College of Toronto. After all, these beauty care products are fundamentally comprised of cleansers, which may be harmful to the skin. Patients ought to fair wash their armpits, crotches, and feet, agreeing to her.

This "soap minimalism" aids the skin's ability to do what it does best: maintain balance. It has developed over millions of years to be able to do so. Scientists are now looking at how the microorganisms that live on our skin, known as the microbiome, interact with our surroundings.

The significance of the apocrine sweat glands has been discovered in the new study. They live in the groin and armpits, where they secrete oily secretions that generate body odor. But they also serve a very important purpose: they keep the billions of bacteria that dwell in and on us alive.

These microorganisms may serve as an unseen top layer of our skin, which may seem nasty. They help it maintain a dynamic relationship with the rest of the globe.

## Chapter 2 - All through human history, the thought processes for cleansing ourselves have shifted.

We weren't previously so concerned about sterility. People bathed before germ theory for a variety of reasons, including amusement and general well-being.

Take, for instance, the old Roman baths. Gathering spots existed for people to socialize and unwind. The last step was to do the laundry. Because the baths lacked a circulation mechanism, the water was probably definitely contaminated with human perspiration and grime. It's unlikely that hygiene was a major concern.

In order to avoid spiritual pollution, people in ancient Jerusalem cleaned their hands. Before entering the Temple, the Hebrews were expected to wash their hands and feet. People were also required to clean their hands before and after meals. Physical cleanliness, according to rabbis, corresponds to spiritual purity. Before every prayer, Muslims must wash their hands

five times a day. As a result, Arabs constructed intricate water systems much before Westerners.

Over bathing, on the other hand, was considered a sinful indulgence by Christians. This was for theological reasons: then again, Jesus felt that inner cleanliness was more essential than a religious formality. Thus, to sum it up, the European attitude toward cleanliness was casual. It was among the explanations why the Black Death devastated Europe in the 14th century, killing one out of every three Europeans.

The relationship between living circumstances and sickness was not established until 1854. A cholera outbreak was traced to just one place, according to John Snow, a London-based physician: a well adjacent to a cesspit of human excrement.

Snow, on the other hand, was dismissed by the administration. Even so, if he was correct, the entire infrastructure of London would have to be rebuilt. Snow's findings would not be confirmed for another 30 years. When German scientist Robert Koch examined cholera-causing bacteria under a microscope, he discovered this. When combined with Snow's findings and other later discoveries, the relationship between cholera and polluted water was established.

Eventually, germ theory gained traction. Infectious illnesses are thought to be propagated by tiny living organisms. Authorities began to invest in precautionary infrastructures, such as water purification centers and sewage systems, to combat these pathogens. Social standards shifted as well, to the point that being ungroomed was considered hazardous.

The vast unwashed became a derogatory term for the working class, and cleanliness became a status symbol. As a result, there was a great demand for soap.

## Chapter 3 - Advertising was utilized by the soap business to establish a new impression of cleanliness.

The USA and the United Kingdom were experiencing a soap explosion at the close of the nineteenth century. Lever Brothers were one of the companies that distinguished themselves. Their soap wasn't particularly inventive, but their marketing was. Their product, Sunlight Soap, was touted as a savior. Lever Brothers became the world's largest soap distributor thanks to this marketing strategy.

William Lever, the older son, was the mastermind behind the scheme. "Lever didn't promote so much as paint the world with his brand," as one scholar described it. There were advertisements all over the place. William even started a newspaper and wrote a book about health care. Sunlight Almanac was the name of the periodical, and the Sunlight Year Book was the name of the book.

Lever was the first to see that the rise of a new middle class indicated he could now sell to everyone. Costs were falling down as a result of mass production, and soap was becoming more accessible to everyone.

Older soap vendors were brilliant with their use of media to get their word out. They invented sponsored content, which can be seen everywhere: Procter & Gamble created a parenting manual and covered it with Ivory Soap recommendations.

From then, soap operas dominated radio and, subsequently, television. They didn't merely air commercials; they changed the face of broadcasting. The daytime serial was invented by soap opera producers. Soap operas were born out of these broadcasts, which were aimed at housewives.

Soap business titans were one of the first to employ marketing language. Although there is not anything like hard or soft milling, Colgate & Company promoted its Cashmere premium soap as "hard milled" and hence "safer."

Palmolive also cited the advice of unidentified physicians. Here's one from a 1943 ad: "With Palmolive Soap, you can have a lovelier complexion in 14 days." Physicians have proven it!"

Companies needed more soap since it was now in every home. They needed to increase the number of products they offered. As a result, marketers devised a fresh message.

Only a single product, soap, wasn't sufficient anymore. Alternatively, you had to purchase extra products to reverse the effects. Is it true that using soap causes dry skin? Purchase a lotion. This paved the way for the rise of skincare behemoths.

## Chapter 4 - Skincare is creeping into the domain of medicine, but it isn't as tightly controlled as pharmaceuticals.

Skip to present, and "indie" skincare businesses are causing a stir in the industry.

The recent trend at the Indie Beauty Expo in New York is to use terms like "clean," "cruelty-free," and "pure." Indie companies frequently promote a "new" component that hasn't previously been highlighted.

However, the distinction between independent and mainstream companies has more to do with marketing and aesthetics rather than the size of the firm.

Smaller brands are much more likely to take chances with their promises. It's absolutely lawful in the United States to say what you want about the advantages of a cosmetic product as far as you're not advertising a cure for a sickness. This indicates that there is a low entrance barrier. Personal-account or social networks can help a product gain popularity.

The delicate line between cosmetics and pharmaceuticals is being walked by both independent and mainstream firms. They employ complicated technical words, making it difficult for customers to distinguish between medical truths and cosmetic fantasy.

Consider collagen, a protein that keeps skin taut and therefore "youthful." Collagen cannot be applied directly to the face because the molecule is too large to enter the epidermis. Collagen supplements, on the other hand, were in plenty at the Indie Beauty Expo. It tightens up the skin, making it softer and plumper, according to marketers.

Retinoids, which are produced from vitamin A, are recognized as medicines but it also offered as cosmetics over-the-counter. They do, in fact, increase collagen synthesis, according to scientific data. Clients, on the other hand, must conduct their own research.

When compared to how medicines are controlled, this is available for all. Pharmaceutical firms spend many years testing new medicines for safety and efficacy before releasing them. Despite this, we are wary of pharmaceuticals yet fully trust skincare products. What is the reason behind this?

Numerous consumers trust skincare products because they think the medical system has failed them. They believe it has failed to fulfill their goals, so they begin seeking for other options. Skincare devotees are aware that there may be some unscrupulous people out there. They are, nevertheless, persuaded that sharing personal experiences online would assist the community to distinguish between good and bad items.

Skincare gives you a sense of power.

## Chapter 5 - Getting germs on our skin isn't always a negative thing.

We have been separating ourselves from nature since the Industrial Revolution. Despite this, research published in August 2016 found that early exposure to the microbial world outdoors may be beneficial to our immune systems.

The Amish and the Hutterites were the focus of the researchers. These groups share genetic traits and lead lives that have remained virtually unaltered since the seventeenth century. However, there is one significant distinction. Children are never allowed to join their dads on the communal farm in the Hutterite community. Meanwhile, the Amish work with their newborns fastened on their backs. As a result, their children are exposed to soil, animals, and microorganisms as they grow into adults.

Scientists sought to test if it made a difference, headed by allergist and immunologist Mark Holbreich. That's exactly what happened. Children with asthma and allergies were significantly less common in the Amish society. In reality, it's four to six times less.

As a result, microorganisms may be beneficial to us. Why? Consider how the immune system functions to have a better understanding of this. Immune cells are exchanged

between the circulatory system, which includes our blood vessels, and the lymphatic system, which transports lymph across our body. Lymph is a fluid that contains immune cells called lymphocytes.

Their primary responsibility is to detect foreign stuff that enters or adheres to our systems. These foreign materials are considered antigens, and your system launches a counter-attack as quickly as lymphocytes raise the alarm. This is known as inflammation, and it is this process that protects us from disease. However, the immune system may occasionally go haywire. It targets completely innocuous particles or even turns against our own cells. This is how an autoimmune illness develops.

Now, how can we prevent making such grave errors? One method is to teach the immune system how to react appropriately. This can be accomplished by exposing it to germs, which works best while we are young.

Such interaction might begin as early as the initial moments of our life. When a baby is born vaginally, she/he gets some of her mother's germs as she/he goes from the womb to the outer world. The baby is then nursed and given adult immune cells with each feeding.

Children's microbiomes continue to develop as a result of their daily interactions. These germs are spread through family members, soil, animals, and even the toys of other kids.

## Chapter 6 - Antibiotic overuse is probably doing havoc on human health more than overzealous cleanliness.

Do you recall the Lever Brothers from a previous chapter? Sunlight Soap was only the beginning of its effect on modern hygiene. Actually, they pioneered a marketing concept that has lasted more than a century.

Lifebuoy, a new soap, was introduced in 1894. It was supposed to be as effective as medication, curing fevers and colds. Why? Because the major component was carbolic acid, an antiseptic that killed dangerous bacteria. This sales pitch was particularly effective in a civilization that had just recently learned germ theory.

Body odor, or B.O., was later created by the manufacturers of Lifebuoy Health Soap. This was also a marketing ruse. Body odor is generated by bacteria, thus you need soap to kill those bacteria, according to Lever Brothers. Although fear-based marketing wasn't founded on research, it worked, and sales doubled. It was just a matter of time before soap manufacturers began including antibiotics in their formulations.

A new deodorant soap was introduced to the market in 1948. Dial was the brand name, and it included the antibiotic hexachlorophene. Similar items emerged, and hexachlorophene was finally recognized as a cosmetics component. However, tests conducted 30 years later indicated that this toxin may penetrate the skin and damage the neurological system. This

may have signaled the end of antibiotics in soap, but cosmetics manufacturers devised a remedy: they replaced hexachlorophene with triclosan, a microbe-killing chemical.

Is the issue now resolved? That's not entirely true. Recent research suggests that long-term exposure to triclosan can increase tumor growth, disrupt hormone function, and potentially induce allergies.

This is concerning, especially given our high triclosan exposure. According to the research from 2009, three out of every four Americans had triclosan in their urine.

Now, are all of these dangers worthwhile? Is it true that antibacterial cosmetics are more effective than ordinary soap and water in fighting disease? The US authorities decided to investigate in 2013, and the Food and Drug Administration requested proof from soap manufacturers. They didn't give much. As a result, triclosan, hexachlorophene, and 17 other antibacterial compounds have been banned from soap.

The current skincare trends advocate intentionally introducing germs to our bodies, which is an absurd sequence of events. Many indie skincare businesses are now selling probiotics and prebiotics, which are chemicals that help microbial populations flourish. It won't be long until large corporations jump on board.

## Chapter 7 - The microbiome of our skin may provide vital information about our health.

Claire Guest was investigating the possibility that dogs may detect cancer in 2009. Daisy, a golden retriever, was one of the dogs in the research who became Claire's companion. When the researcher was going home from the park, the dog began acting strangely. She remembered, "She seemed a little suspicious of me."

Claire suddenly realized feeling a little bump in her breast a few days before. She hadn't truly contemplated the potential of breast cancer at the moment.

Claire has been working nonstop with dogs that can detect indications of cancer as well as other illnesses ever since, and her illness is currently in recovery.

We already know how good a dog's sense of smell is. But how serious is it? They can detect slight changes in our volatiles, the complex cocktail of molecules we all release, as it seems apparent. As a result, dogs are excellent at detecting sickness.

Dogs have already been trained to respond to high blood sugar, and they're showing potential in detecting Parkinson's disease, which is connected to skin abnormalities.

Claire Guest is perplexed as to what is causing the disease's odor. What exactly are the dogs looking for? Is it possible that our microbiome is to blame?

This idea is gaining traction, and if research shows Guest correct, we may be able to harness these changes in our skin microorganisms. Doctors may be able to detect and treat the condition earlier as a result of this.

British researchers sought to employ dogs to spot malaria in another study.

Hundreds of Gambian students were tested for the illness, and each child was given a new pair of socks. Scientists retrieved the socks a few hours later and shipped them to London, where medical detection dogs went to work. Dogs accurately detected contaminated children's socks in seven of the eight cases.

What's certain is that the chemicals produced by our skin aren't arbitrary. Maybe it's time to focus our efforts on understanding more about our skin rather than attempting to scrub it clean.

## Chapter 8 - We need a balance of hygiene and exposure to microbes to maintain good health.

Florence Nightingale was a nurse who commanded a group of nurses in a military hospital in Crimea in the 1800s when the British were combating Russians. When Florence Nightingale landed in the combat zone, medical treatment was a disaster. Infectious illnesses claimed the lives of ten times more soldiers than warfare.

The wards were filthy and infested with lice and fleas. Nightingale thought that the men needed fresh air to enhance their health, therefore she recommended that additional doors and windows be opened to improve circulation. Her strategy worked: according to one report, the mortality rate dropped by roughly 40%.

What Florence Nightingale accomplished influenced hospitals all around the world. Her accomplishments inspired doctors to open up their clinics and let more fresh air in.

Modern science soon came to the forefront. Modern hospitals started separating patients into cramped rooms with limited airflow, despite growing facts that Nightingale's technique worked. The windows were slammed shut once more.

Human hygiene has been a tale of contradictions throughout history. Maybe now is the time to think about what we've learned from both methods.

There are two things that stick out. First, consider how we might preserve microbial diversity. One method to do so is to live in a community. People who live together have similar microbiomes, according to a 2017 study conducted at The University of Waterloo. They have a higher diversity of microbes too. People who have dogs, drink less alcohol, and exercise outside had similar results.



Also, there is a global mismatch in cleanliness habits that has to be addressed. Richer countries adopted sterility — to their own disadvantage in some cases. People in other parts of the globe, on the other hand, do not even have access to safe drinking water. More than a third of us don't have access to a handwashing station at home.

Infections continue killing billions of people throughout the world. Following the 2010 earthquake in Haiti, cholera claimed the lives of 8,000 people. These fatalities may have been avoided if there had been clean water and proper hygiene.

Because health is such a personal matter, it's only natural that we should investigate the institutions that impact our well-being and hygiene practices. However, because healthcare is a public problem, rather than hoarding resources, we should collaborate to support global health efforts.

## Clean: The New Science of Skin by James Hamblin Book Review

To avoid the transmission of infectious illnesses, we must adopt basic hygiene habits such as washing our hands with soap and clean water. However, we should not clean excessively. Less is more in this case. Excessive bathing is significantly less beneficial to our health than cultivating a varied microbiota via exposure to the outside world.

Discuss your personal hygiene ideas and habits.

Inquiring about people's cleanliness practices is one approach to challenge arbitrary personal hygiene norms. It's a wonderful icebreaker, and people, in the author's experience, are very ready to contribute. It aids in the dismantling of communication obstacles. You'll also be more educated when you start to hear what other people do.

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