

## **Culture Revolution For Negative Effects Always Using Hand Sanitizer In This Covid-19 Pandemic; E-Review Paper**

**Agussalim<sup>1</sup>, Syamsir<sup>2</sup>, M. Nasir<sup>3</sup>, Abd Rahman<sup>4</sup>, Suriani<sup>5</sup>, Sofietje Gentingdatu<sup>6</sup>, Abidin<sup>7</sup>, Rustam Aji<sup>8</sup>, Masdiana AR<sup>9</sup>, Anna Veronica Pont<sup>10</sup>**

<sup>1,2,3,4,7.</sup> Parepare school of Nursing, Makassar Health Polytechnic, Jalan laupe, Bukit Harapan Village, Soreang, Parepare City, South Sulawesi, Indonesia.

<sup>5,6.</sup> Jayapura School of Nursing, Jayapura Health Polytechnic, Jalan Padang Bulan 2, District Heram, Jayapura City, Papua Province, Indonesia.

<sup>8</sup> School of Nursing, Bengkulu Health Polytechnic, Bengkulu Province, Indonesia.

<sup>9</sup> Makassar School of Nursing, Makassar Health Polytechnic, South Sulawesi Province, Indonesia.

<sup>10</sup> Palu School of Midwifery, Palu Health Polytechnic, Center of Sulawesi Province, Indonesia.

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### **Abstract**

Hand sanitizer is one of the mandatory to be used in this covid-19 pandemic. It is purposed to protect from covid-19 viruses transmitted. There are many benefits of using hand sanitizer example simple in using all around. Although the benefits, it has many negative effects in using this product. The methods of this study use re-review from many references inside the internet website. The results of this study inform that many negative effects of this study like dry skin, diarrhea, disrupting child immunity, and infertility. As a recommendation, the user of hand sanitizer must be aware of using this product. Hands washing with water flowing more qualify to be used to clean the hand.

**Keywords:** Hand sanitizer, covid-19, pandemic, negative effects.

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### **E-review based science**

Hand sanitizer is a mandatory object that must always be in the bag, when traveling during the covid-19 pandemic as a destination for disinfectant materials. Hand sanitizer works by breaking down walls of bacteria and viruses, and inhibiting their development. To effectively inactivate the coronavirus, the World Health Organization (WHO) recommends the use of hand sanitizer with an alcohol content of at least 60 percent.

Various public places also currently always provide a large bottle of hand sanitizer for all visitors to use as a prophylaxis against the spread of the covid-19 virus. Although it can be a solution to clean your hands when there is no water and soap available, excessive use of hand sanitizer also has bad side effects.

This is conveyed by the Food and Drug Administration (FDA) of the United States (US). The agency warns of the dangers of hand sanitizers that during the Covid-19 pandemic are increasingly widely and often used. The FDA said in a press release on Tuesday that hand sanitizer can cause its users nausea, dizziness, and side effects that require medical treatment. "The FDA reviews case reports submitted to the FDA and cases from calls to the U.S. poison control center about side effects after using alcohol-based hand sanitizers to the skin," the FDA said. "While most cases produce little or minimal effects, some cases result in treatment by health care professionals," the agency added.

The FDA explains that common symptoms such as headaches, nausea, and dizziness are usually caused by smoke released by alcohol-based hand sanitizers. For this reason, users are encouraged to only use hand sanitizer in well-ventilated areas and use soap and water if available. Excess hand sanitizer when used will cause many side effects as reported by Live strong, the following side effects of excessive use of hand sanitizer:

### **1. Dry Skin**

One of the common side effects that must be experienced by everyone who uses hand sanitizer excessively is dry skin. This is because the alcohol content in this hand sanitizer gel can erode skin moisture. As a result, the skin feels dry, cracked, even eczema appears in people with sensitive skin. On the other hand, this material can cause damage to enzyme RNA that can bind to bacteria, so the level of activity is very low when entering with food into the body's digestive tract.

Basically, the main purpose of this RNA enzyme is used in genetic analysis, with the aim of degrading RNA, so that what lives from a living cell is its DNA. This enzyme is always contained in the fingers and palms of human hands, so – assuming efforts have been made to hygiene the hand before – the process of bribery of food into the digestive tract will include enzymes that can bind to bacterial cells so that their activity is not maximal.

Once food enters the digestive tract, this enzyme will also bind the movement of bacteria to the sewer. Conversely, if humans eat using intermediate tools such as spoons and forks, then no one can withstand the rate of bacterial activity contained, either in food or cutlery itself.

Dr Charles Gerba of the University of Arizona said in his research that we are unlikely to block germs and bacteria from entering our environment. But we can fight germs by washing our hands before and after activities. It was published paparetta.wordpress.com, in October 2010, eating by hand proved to be healthier.

### **2. The risk of diarrhea increases**

Naturally, in various parts of the body there is actually an ecosystem of microorganisms, including bacteria. These microorganisms have an important role in maintaining the health of the body, preventing infection, and fighting bad bacteria. Well, hand sanitizer is able to kill all types of bacteria on the skin, including good ones.

Mahmoobeh Mahdavina, associate professor of allergy and immunology at Rush University, said that when colonies of good bacteria on the hands are killed, microorganisms in the gut will also be affected. As a result, the immune system becomes weakened and your body becomes more sensitive to bacteria that can cause digestive problems, such as diarrhea. Even so, Mahdavina said that this effect can

be overcome by feeding good bacteria in the body, such as eating yogurt. However, it is also important not to overdo it in using hand sanitizer..

### **3. It can't kill all types of bacteria.**

Although powerful in cleaning hands and recommended by WHO to kill the coronavirus, hand sanitizer in reality cannot eradicate all types of bacteria. This hand sanitizer gel cannot kill the diarrhea-causing bacteria, *Clostridium difficile* (C.diff), nor virus and *Cryptosporidium*. Not only that, dirt that looks like dust and soil particles will not be clean just by using a hand sanitizer. So, when the hands are in a very dirty condition, it is best to clean them with running water and soap, instead of just using a hand sanitizer. Soma Mandal, internist at Summit Medical Group Berkeley Heights, New Jersey, USA, recommends using hand sanitizer as a interseited. Not as a substitute for hand washing.

### **4. Disrupting the Development of Child Immunity**

The formation of a child's immune system or immunity is very important in the first years of life. Although you want children to avoid bacteria and viruses that cause disease, misguided if instead keep it away from all dirty things. Because, exposure to bacteria and pathogens in children can actually help their immunity build strong. Immunity that is awakened can be sourced naturally from nature which will actually cause a child will be more resistant to exposure to pathological nature.

However, that does not mean parents should not adopt a clean lifestyle. Instead of teaching children to always use hand sanitizer, teach them to wash their hands regularly with running water and soap. Excessive use of hand sanitizer can actually kill good bacteria that are mutualism and commensalism on their skin.

### **5. Poisoning due to inhalation**

Methanol poisoning can occur from absorption through the lungs, namely due to inhaling methanol fumes. Symptoms of methanol poisoning include nausea, vomiting, dizziness, headaches, weakness, visual impairment, and loss of consciousness. Smoke from methanol is also flammable and has potential hazards. According to a study published in Science Direct, acetaldehyde (ethanol) is produced from ethanol metabolism. Acetaldehyde is used to produce other chemicals, including acetic acid, disinfectants, drugs, and perfumes. Acetaldehyde is classified as a highly reactive and toxic material. Who considers acetaldehyde a Class 1 toxin or harmful material that can cause cancer.

### **6. Interfere with fertility**

In addition to being made of alcohol, there is also a hand sanitizer consisting of antibiotics. However, the use of hand sanitizer made from antibiotics can cause problems, especially when used in excess. One of the times is that your fertility is disrupted. Sperm will have difficulty when they reach the egg. The higher the ability of sperm is in swimming, the greater the chance of fertilization. This also applies vice versa, namely if the ability of sperm during swimming decreases then the chances of being able to get pregnant or conception are also smaller. It can also damage DNA at the time of conception. When the DNA of the egg and sperm cells are damaged, this fertilization will be difficult to occur. Although fertilization has occurred, the risk of miscarriage is higher. As quoted from likepack.id it is said that women will accelerate the loss of eggs so that the chances of getting pregnant are very small.

### 7. Disrupting the body's immune system

The ingredients used to make hand sanitizers can interfere with the body's immune system. When the body's immune system decreases, your body becomes more susceptible to infection with diseases so that your health condition becomes dangerous. Those are some of the adverse effects of excessive hand sanitizer use that need to be known. Hand sanitizer is still a WHO recommendation, so it is necessary to always provide it when traveling. However, the thing to remember is, do not too often and excessively also in using it. If it is still possible to wash your hands with running water and soap, then wash your hands only. The use of hand sanitizer should only be an interseitment, or when there is really no water source around us.

In addition, keep always the body's endurance remain strong, by living other healthy lifestyles such as adequate rest, waking up at dawn, multiplying worship to God, nutritious consumption by reducing too sweet, high fat, and salty, regular exercise in accordance with the body's abilities, and avoid excessive stress in the sense of the word must always be at peace with yourself and full of life spirit.

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