



# HIDING SIDE EFFECT OF USING MASK FOR LONG TIME IN COVID-19 PANDEMIC; EREFERENCE INTERNET BASED.

Agussalim<sup>1</sup>, Abd Rahman<sup>2</sup>, M. Nasir<sup>3</sup>, Bahruddin<sup>4</sup>, Muhammad Saleng<sup>5</sup>, Syamsir<sup>6</sup>, Citrawati<sup>7</sup>,

Sofitje Gentingdatu<sup>8</sup>, Masdiana AR<sup>9</sup>

<sup>1,2,3,4,5,6</sup>. Parepare School of Nursing, Makassar Health Polytechnic, Parepare City, South Sulawesi Province, Indonesia.

<sup>7</sup>. Centre for Excellent, Makassar Health Polytechnic, Makassar City, South Sulawesi Province, Indonesia.

<sup>8</sup>. Jayapura School of Nursing, Jayapura Health Polytechnic, Jayapura City, Papua Province, Indonesia.

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

## Abstract

The WHO organization's recommendation on the current pandemic conditions is the use of masks at all times and every area to prevent the transmission and contracting of covid-19 disease. This situation causes people's fear of this pandemic, so the use of masks has become a necessity and culture in the community. The purpose of this study is to find out the effects that arise due to the use of old masks on the individual body. The method used is the collection of a number of references with the internet based E-references model. There are some side effects of using a long mask such as irritation, increased CO<sub>2</sub>, headache, hypoxia and others. The recommendation to prevent this effect is to open the mask in an open area rich in O<sub>2</sub> by taking a breath in 5 minutes every two hours of use of the mask, avoid stress, the mask hook strap should not be from latex, the mask should not be made of fine feathers or wool that can be inhaled, and when you want to sneeze the mask is opened and the nose is closed wearing tissue.

**Keyword :** Hiding, Side Effect, Mask, Pandemic Vovid-19

## Introduction

In March 2020, New York State encountered its first official case of COVID-19. This novel coronavirus, referred to as SARS-COV 2, originated in Wuhan, China in December 2019. Within a short amount of time, hundreds of thousands of cases were diagnosed around the world, causing the World Health Organization to announce it as an infectious disease pandemic on January 30, 2020.

New York City quickly became the epicenter of the United States COVID-19 pandemic due to its tremendous number of cases. It is the same of Jakarta as capital city of Indonesia has millions of cases due to covid-19 pandemic too. COVID-19 is spread by respiratory droplets, and healthcare professionals are mandated to wear personal protective equipment

(PPE) when caring for COVID-19 patients. PPE includes gowns, gloves, masks, and face shields.

Aside from a major shortage of PPE across the United States and many countries causing stress to hospital administrators and healthcare professionals on the front lines, many expressed added stress from adverse effects of prolonged PPE usage. The last incidence of prolonged use of PPE among healthcare professionals was during the SARS (severe acute respiratory syndrome) outbreak in 2003-2004 which originated in Guangdong, China.

There are studies focusing on effects of prolonged use of PPE during the SARS outbreak was published in subsequent years. A study by Lim, et al. focused on headaches related to mask use, and another study by

Foo, et al. discussed adverse skin reactions such as rashes, acne, and itching from mask use. It is the same with interviewed study by Agussalim in many workers in the groceries related to their acnes arisen in their face since last two years pandemic covid-19.

The Center for Diseases Control (CDC), WHO, and the ministry of health of Indonesian Republic recommend wearing N95 masks during care of patients with highly transmissible diseases such as tuberculosis, SARS, and COVID-19. The N in N95 stands for NIOSH, the National Institute for Occupational Safety and Health of the United States and 95 indicates filter efficiency of particles. Thus, an N95 mask is 95% effective at filtering airborne particles including very small ones.

In comparison, while surgical masks provide a barrier against large respiratory particles, they are ineffective at providing protection from smaller particles. Surgical masks also do not prevent leakage around the mask when the user inhales. Therefore, surgical masks are ineffective and do not provide enough protection when performing direct care for patients with COVID-19.

To prevent the spread of COVID-19, hospitals required their employees and visitors to wear a mask at all times when in the facility. Generally, employees and visitors wore surgical masks, and when providing direct care for COVID-19 patients, the employees donned N95 masks.

Based on the background above, we really so curious to explore more about the hide effect of using mask prolonged time based on literature.

## Method

This study was surf from the many suitable literatures to be summarized. It is derived from internet for being summarize under “no hoax application”. The literature is not only coming from the article but many of them come from the experts which are recorded from the news website.

## Result

Result. In references we cite describes any hiding side effects of using mask prolonged due to covid-19 pandemic. It is one of the dangerous cases for body system; such us:

## Stockpiling Carbon Dioxide

The use of masks that are too long can make the accumulation of carbon dioxide. Starting from the exchange between oxygen and carbon dioxide is disrupted and will allow the accumulation of carbon dioxide in the respiratory system and lactic acid throughout the body. Carbon dioxide gas is needed by the body, but if the amount is excessive it will become acidosis that causes oxygen in the blood is difficult to release into the body's cells and the body becomes deprived of oxygen. This will make you feel dizzy, nausea, headaches, heart rate increases to coma and death.

## Skin Irritation

Irritation of the skin can also occur if you use the mask for too long; it is due to the suppression and friction of the mask itself during use. This irritation will usually occur at the bottom of the eyes, nose and chin. Skin irritation, skin dehydration, and acne will occur around the mouth because the skin's natural moisture disappears. On the other hand, due to the use of old masks those are not replaced so that the accumulation of dirt and micro pathogenic organisms in the area resulted in local infections.

## Headache

The next danger when you wear a mask for too long is a headache, if the taste begins to be felt then you should immediately end the use of the mask. Blaylock, a retired neurosurgeon from the United States conducted a study of 212 health workers who he asked to report the presence of headaches while using N95 masks, including the duration and type of headaches, as well as whether they had a previously existing headache. The study found that about one-third of medical workers experience headaches while using N95 masks. The majority have previously existing headaches that get worse due to the wearing of masks. Then, about three out of five medical workers need pain medication to relieve headaches.

The researchers found that masks reduced blood oxygen levels (pa02) significantly. The longer the duration of use of the mask, the greater the decrease in oxygen levels in the blood, "said Blaylock. The potential of the mask reducing oxygen levels in the wearer is important, not only because it can cause fainting, but also because the mask is associated with reduced natural immunity.

## Increased Airway Resistance

Airway resistance will also occur to you if you wear a mask for too long. This health condition is an obstacle that results from the friction force of air flow, the friction enters the respiratory tract with the walls of the airway. This airway resistance can occur due to bronchial smooth muscle, density, viscosity of respiratory gas and lung volume contracting. If left unchecked it can result in the onset of bronchial asthma, chronic obstructive pulmonary disease to obesity hypoventilation syndrome. In the next few years there will be an increase in COPD cases which is one of the palliative cases that require long handling and drains the large state budget.

## Hypoxia

Hypoxia is one of the dangers that can occur if you wear a mask for too long. Hypoxia is a condition that results in a lack of oxygen supply in the body's cells and tissues. This condition occurs when there is a disturbance in the oxygen transport system from breathing until oxygen is used by the body's cells. Hypoxia that is left continuously interferes with the function of the brain, liver, and other organs quickly. Here are the symptoms of hypoxia reported from short and fast breath, being dazed or confused, rapid heartbeat, Cough, Skin color becomes somewhat bluish or can become bright red, limp, breathing sounds, loss of consciousness, feeling like being strangled and sweating cold.

Currently the number of traffic accidents is very high in Indonesia, especially four-wheeled riders who wear tight masks. This can be the effect of hypoxia due to lack of oxygen that results in chaotic brain control or a person becomes unconscious while driving and results in traffic accidents on the highway.

## Suggestions

1. Based on the references we get, to prevent the side effects of using masks for a long period is: Masks must be disposable or must be washed every day if they must be used many times.
2. Disposable masks should not be worn for more than 8 hours per day. Fabrics that can be used many times are those that are not made of wool.

3. Any sneezing or cough mask should be opened and closed with tissue and then discharged to the infectious site.
4. Every 2 hours wearing a mask, it must be open to breathe fresh air rich in oxygen so that the body, especially the lungs gets fresh air.
5. The mask or hook should not be made of latex because it can trigger allergies to the face area.
6. Avoid wearing a tight mask when driving a vehicle or exercising.

## References

1. Lim ECH, Seet RCS, Lee K-H, Wilder-Smith EPV, Chuah BYS, et al. (2006) Headaches and the N95 face-mask amongst healthcare providers. *Acta Neurol Scand* 113: 199-202.
2. Foo C, Anthony TJ Goon, Yung-Hian Leow, Chee-Leok Goh (2006) Adverse skin reactions to personal protective, Rosner. *J Infect Dis Epidemiol* 2020, 6:130
3. Center for Disease Control and Prevention (2020) NIOSH-approved N95 particulate filtering facepiece respirators: Ancillary respirator information.
4. Johnson AT (2016) Respirator masks protect health but impact performance: A review. *J Biol Eng* 10: 4.
5. Ong JJY, Bharatendu C, Goh Y, Tang JZY, Sooi KWX, et al. (2020) Headaches associated with personal protective equipment- A cross sectional study among frontline healthcare workers during COVID-19. *Headache* 60: 864-87
6. Lan J, Song Z, Miao X, Li H, Li Y, et al. (2020) Skin damage among health care workers managing coronavirus disease-2019. *J Am Acad Dermatol* 82: 1215-1216.
7. Badri FM (2017) Surgical mask contact dermatitis and epidemiology of contact dermatitis in healthcare workers. *Current Allergy & Clinical Immunology* 30: 183-188.
8. Rebmann T, Carrico R, Wang J (2013) Physiologic and other effects and compliance with long-term respirator use among medical intensive care unit nurses. *Am J Infect Control* 41: 1218-1223.
9. Darlenski R, Tsankov N (2020) Covid-19 pandemic and the skin- What should dermatologists know? *Clin Dermatol.* equipment against severe acute respiratory syndrome- a descriptive study in Singapore. *Contact Dermatitis* 55: 291- 294.