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Fact Checkers: It's OK to Inhale Nanosized Titanium Dioxide

Analysis by Dr. Joseph Mercola Fact Checked | December 27, 2022

STORY AT-A-GLANCE

- Fact checking group Health Feedback took issue with my article, "Masks Now Found to Contain 2B Carcinogen," which reported on research published in Scientific Reports
- The study found every mask contained potentially carcinogenic titanium dioxide particles in at least one layer
- Health Feedback implies it's safe to breathe in titanium dioxide particles in face masks, noting there's "inadequate support" to warn people that nanosized titanium dioxide in their face masks could pose a health risk
- Health Feedback is a member of Vaccine Safety Net, a project led by the World Health Organization. Its parent organization, Science Feedback, is partnered with Facebook, TikTok and Google News Initiative
- It's also tied to the International Fact Checking Network, founded by the Poynter Institute, which is funded by grants from the Bill & Melinda Gates Foundation, Google, Facebook, U.S. Department of State and the Omidyar Network (owner of PayPal)
- To protect public health, studies should be conducted to determine the short- and long-term risks of exposure to particles of all kinds from face masks — certainly before their use is ever mandated again

The fact-checker police have spoken once again, this time to assert that it's perfectly acceptable to breathe in titanium dioxide particles in face masks.[1] Health Feedback took

issue with my article, "Masks Now Found to Contain 2B Carcinogen," which reported on research published in Scientific Reports.[2]

The researchers tested the amount of titanium — used as a proxy for titanium dioxide (TiO_2) particles — in 12 face masks meant to be worn by the public, including single-use disposable varieties as well as reusable masks. The masks were made of various materials, including synthetic fibers like polyester and natural fibers, such as cotton.[3]

Every mask contained titanium dioxide particles in at least one layer,[4] a concerning finding since titanium dioxide is a suspected human carcinogen when inhaled.[5]

Rather than warning of its potential health risks, and, as the researchers stated, need for "in depth research of (nano)technology applications in textiles to avoid possible future consequences …"[6] Health Feedback wants you to throw the precautionary principle to the wind and instead believe such warnings are "misleading."[7]

Fact Checkers Say Nanoparticles in Masks Are Safe

The International Agency for Research on Cancer (IARC) classifies titanium dioxide as a Group 2B carcinogen, which means it's "possibly carcinogenic to humans" by inhalation.[8]

The state of California also includes titanium dioxide in the form of airborne particles measuring 10 micrometers or less on its Proposition 65 list, stating, "Titanium dioxide (airborne, unbound particles of respirable size) is on the Proposition 65 list because it can cause cancer. Exposure to titanium dioxide may increase the risk of cancer."[9]

Despite the fact that titanium dioxide's carcinogenicity when inhaled is well known, the compound is commonly used in face mask textiles to improve stability to ultraviolet light and for use as a white colorant and matting agent. The Scientific Reports study also stated, "Although titanium dioxide (TiO_2) is a suspected human carcinogen when inhaled, fiber-grade TiO_2 (nano)particles were demonstrated in synthetic textile fibers of face masks intended for the general public."[10]

According to Health Feedback, however, my article "misrepresents" the Scientific Reports study, because, "While a Belgian study found titanium dioxide particles in face masks, it didn't assess whether those particles could be released from the mask and inhaled by the wearer in sufficient amounts to cause any adverse effects. Therefore, claims that face masks are unsafe based on this study are unsupported."[11]

The presence of carcinogenic titanium dioxide particles in face masks, which by design are right next to your mouth and nose for extended periods of time, is cause for concern in itself. That said, other studies have looked into the concentration of TiO_2 released from fabrics, finding that the release rate depended on the concentration of nanomaterials in the fabric along with the pH of sweat the fabric was exposed to.[12]

Titanium Dioxide's Carcinogenic Potential 'Misleading'

Health Feedback specifically said the claim that "exposure to titanium dioxide 'systematically exceeded the acceptable exposure level to TiO_2 by inhalation'" is "misleading."[13] But this statement is directly from the study, which based this data on the estimated TiO_2 mass at the fiber surface along with a scenario in which face masks are "worn intensively."[14]

What's more, Health Feedback states there's "inadequate support" to warn people that nanosized titanium dioxide in their face masks could pose a health risk:

> *"Titanium dioxide was classified as a "possible carcinogen to humans" by inhalation based on studies in rats. However, no conclusive evidence has shown that this compound increases the risk of cancer in people. Furthermore, rats received much higher doses of titanium dioxide than those present in masks, which in addition may only release part of it."*

The fact is, rats exposed to TiO_2 nanoparticles by inhalation developed tumors.[15] This alone should give anyone pause when considering use of a face mask containing TiO_2 nanoparticles. New Jersey Department of Health's Right to Know Hazardous Substance Fact Sheet is also very clear about the health effects of titanium dioxide, stating:[16]

> *"Titanium Dioxide may be a CARCINOGEN in humans. There may be no safe level of exposure to a carcinogen, so all contact should be reduced to the lowest possible level."*

Who's Behind Health Feedback?

So who or what entity is behind the fact-checking group Health Feedback? As is the case with the vast majority of self-proclaimed "fact checkers," it can be traced back to the global technocratic elite.

Health Feedback is a member of Vaccine Safety Net, a project led by the World Health Organization. According to WHO:[17]

> *"Health Feedback verifies scientific claims in the media by soliciting evidence-based reviews from subject matter experts who provide credible references to recently published scientific literature that supports their analyses.*
>
> *A large number of our articles focus on correcting misinformation about vaccine safety contained in news coverage or content disseminated via social media platforms … Science Feedback, the parent organization of Health Feedback, is a signatory of the International Fact Checking Network …"*

The International Fact Checking Network, founded by the Poynter Institute, is funded by grants from the Bill & Melinda Gates Foundation, Google, Facebook, U.S. Department of State, the Omidyar Network (owner of PayPal), and George Soros-owned nongovernmental organizations such as the National Endowment for Democracy and his Open Society Foundations.[18] Parent organization Science Feedback, meanwhile, is partnered with Facebook, TikTok and Google News Initiative.[19]

Health Feedback Has Made False Claims Before

This isn't the first time Health Feedback has targeted me. March 1, 2022, it also slapped false labels on statements in another one of my articles related to the overcounting of

COVID-19 deaths.[20] "There is no evidence that COVID-19 deaths have been overcounted; in fact, public health experts believe that deaths have actually been undercounted in many countries," according to Health Feedback.[21]

As "proof," it cites a study from India, which found they had undercounted COVID deaths. Could Health Feedback not find evidence from the U.S. or the U.K. to back up its claim? Probably not, because the fact that the U.S. (and the U.K.) overcounted COVID deaths is **simply indisputable**.

Health Feedback also labeled the statement that "hospital incentives are driving up COVID deaths" as "misleading." Yet Health Feedback confirms that hospitals are receiving financial incentives for using certain treatments, including mechanical ventilation and Paxlovid.

But we're to take them on their word that the prospect of making significantly more money would never influence a hospital's decision to treat a patient in a particular way. I'll let you decide if you believe that or not.

WHO's Intent on Controlling What You See Online

It's not surprising to see WHO behind Health Feedback or any other "fact checker" online. WHO is quite open — boastful even — that it's working with Big Tech to combat misinformation online.[22] WHO states that it's "changing social media policy and guidelines," and:[23]

> *"WHO works with social media policy departments to ensure company policy and guidelines for content providers are fit for purpose. For example, WHO worked with YouTube to enhance their COVID-19 Misinformation Policy and provide guidelines for content providers to ensure no medical misinformation related to the virus proliferates on their platform."*

As a result of WHO's "policy updates," 850,000 YouTube videos related to "harmful or misleading COVID-19 misinformation" were removed from the platform from February 2020 to January 2021.[24] As justification for its rampant censorship, WHO explains:[25]

> *"WHO and partners recognize that misinformation online has the potential to travel further, faster and sometimes deeper than the truth — on some social media platforms, falsehoods are 70% more likely to get shared than accurate news. To counter this, WHO has taken a number of actions with tech companies to remain one step ahead."*

Lest you see all sides of an issue and form an educated opinion of your own, WHO intends to carefully control the internet so you only see what it deems as the "truth." And it's working closely, "on a weekly basis," in fact, with master manipulators in their own right, including YouTube, Google, Facebook and "several other partners such as NewsGuard …"[26]

Compounds in Face Masks Are Cause for Concern

Getting back to the topic of face masks and the potentially toxic compounds they contain, don't let a "fact-checker" online decide for you what's worthy of further scrutiny. In the case of material that's strapped over your mouth and nose for hours at a time, the utmost purity is clearly crucial — but that's not the case with most face masks.

In fact, micro- and nanoscale fibers and particles and heavy metals, including lead, antimony and copper, have been detected in face masks.[27] While studies haven't — to my knowledge — directly assessed whether these particles are released from the masks during normal usage, there's certainly a risk that they could. And the environmental effects are also undeniable.

In a study by Swansea University, researchers submerged seven disposable facemask brands in water to simulate what happens with littering, when masks end up in waterways. According to a university news release:[28]

> *"The findings reveal significant levels of pollutants in all the masks tested – with micro/nano particles and heavy metals released into the water during all tests.*

> *Researchers conclude this will have a substantial environmental impact and, in addition, raise the question of the potential damage to public health – warning that repeated exposure could be hazardous as the substances found have known links to cell death, genotoxicity and cancer formation.”*

A performance study published in the June 2021 issue of Journal of Hazardous Materials[29] also highlighted that wearing masks poses a risk of microplastic inhalation, and reusing masks increases the risk.

To protect public health, studies should be conducted to determine the short- and long-term risks of exposure to particles of all kinds from face masks — certainly before their use is ever mandated again. As for any organization, such as Health Feedback, that wants to suggest otherwise, careful scrutiny of their true motives is necessary.

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