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**Importance of nose wires in face masks: A reply to “Diagnostic and management considerations for “maskne” in the era of COVID-19”**



*To the Editor:* We read with great interest Teo’s recent publication on the diagnosis and management of “maskne,” a form of acne mechanica due to face mask use during the COVID-19 pandemic.<sup>1</sup> To help combat maskne and other mask-related skin problems, Teo proposed several innovative ideas for the “ideal fabric face mask.”<sup>1</sup> These suggestions include the use of tightly woven, high-thread-count fabrics to minimize friction and increase the ultraviolet protection factor; bright colors to dissipate heat; and silver, zinc oxide, and copper oxide-impregnated fibers to confer antimicrobial and antiaging benefits.<sup>1</sup> Teo posited that biofunctional textiles may incentivize mask wearing,<sup>1</sup> which is crucial for reducing the spread of COVID-19.<sup>2,3</sup>

Notably, Teo specified that the ideal fabric face mask should have “no metallic parts at the nose bridge” in order to minimize friction and nickel sensitization.<sup>1</sup> Indeed, in a survey of 542 physicians and nurses during the COVID-19 pandemic, it was found that the nasal bridge was the most common site of skin damage due to personal protective equipment.<sup>4</sup> Although we understand these concerns, we respectfully point out that a face mask without a nose wire contradicts the guidelines of the US Centers for Disease Control and Prevention.<sup>2</sup> According to the Centers for Disease Control and Prevention, face masks should include a nose wire or “metal strip along the top of the mask,” and it should be bent over the nose to fit close to the face and prevent air leakage from the top of the mask.<sup>2</sup> The Centers for Disease Control and Prevention goes 1 step further, recommending that a mask fitter or brace be worn over a face mask in order to prevent air leakage from the sides.<sup>2</sup> The World Health Organization also recommends the use of face masks with a nose wire, but only for certain individuals, including people aged ≥60 years, those with underlying health conditions, and health care workers.<sup>3</sup>

This raises the question of whether a face mask can be designed in adherence to public health agency guidelines while also addressing the concerns that Teo rightfully raised. Instead of omitting the nose wire altogether, can it be redesigned like an everyday twist tie with a metal

core and plastic, poly, or paper coating? Perhaps the core itself can also be made from plastic, poly, or a non-nickel metal. Others have proposed that mask wearers apply a barrier film spray or soft silicone, paraffin, or extrathin hydrocolloid dressing over their nose prior to wearing a mask.<sup>5</sup> Although all these solutions may prevent nasal bridge injuries, they have an unknown effect on face mask seal.<sup>5</sup> Studies investigating how any of these adjustments affect mask integrity would be incredibly valuable.

In summary, Teo’s article shows the value of dermatologist input in designing face masks.<sup>1</sup> Given the importance of wearing masks to decrease the spread of COVID-19 as well as the associated potential dermatologic benefits and side effects, we are excited about the ways in which our specialty can contribute to face mask design during this ongoing pandemic.

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**Conflicts of interest**

None disclosed.

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