JUUL Blamed for Collapsed Lung

By Chuck Dinerstein, MD, MBA — August 14, 2019

It began with the Daily Mail in the UK reporting on a lead from Instagram of a Florida teen whose lung collapsed from vaping. What a great story in this media environment, if only it were true. The teen reports that the toxic chemicals in JUUL caused his lung to collapse.

A moment of medicine

The lung resides within a “wrapper” called the pleura that eases the movement of the lung against the chest wall and maintains a negative pressure to help keep the lung expanded. When the air gets inside this wrapper, between the chest wall and the lung, it can cause the lung to collapse – pneumothorax is the medical term. Air can get into the pleura in two ways, through external trauma, e.g. stabbing or a fracture of your rib or through the lung itself when a bleb (a small “bubble” or area of lung tissue that has lost its supporting components) ruptures allowing the free flow of air from the lung into the pleura.

Spontaneous pneumothorax is caused by blebs and is most often experience by --- wait for it, young men, say late teens early twenties. So, the most likely cause of the young man’s collapsed lung was not toxic chemicals but a bleb. But a repentant JUUL smoker with an injury is too tempting to ignore even if the science is a bit off.

The breathlessness of the Daily Mail’s coverage continues,
“Chance has been vaping mint pods - the last flavored form that the Food and Drug Administration (FDA) has allowed the company to market.

A recent Yale University study found that the chemicals that give Juul pods their flavors combine when heated to create toxic chemicals that aren't disclosed on their labels.”

Here is one of the true, true, and unrelated moments that form a cornerstone to fake news. The second statement about the Yale study found their concern was over acetals found in one flavor of Juul, Cream Brulee (why someone would want to inhale the taste of a dessert is beyond me) – it is the half-truths that are most misleading.

The Daily Mail’s article was, in turn, picked up, repackaged [2] and appeared on AOL in a slightly less breathless form although the misinformation continues to spread. None of the pictures of the injured lung, I assume they carry copyright, but still the unfounded claim that Juul and its toxins caused the lung to collapse.

Concerning JUUL, for smokers, it is a better alternative than continuing to smoke but is not as good as stopping. It makes no sense to inhale combustion products whether that combustion is from an open flame or an electronic glow plug. We have no data on JUUL’s short or long-term effects, although as I have just said, inhaling combustion products is not in our best interest, ask firefighters. In the meantime, stories like this provide more “bread and circus,” distracting us from more substantial issues and letting us vent.