

Cellular Health: Barrier Compromise

The article in the following link establishes the fact that the use of solutions that are hyperosmotic¹ will open the endothelial cell based blood brain barrier (BBB) for a period of time to allow transport of medications, etc. One of these substances is mannitol.

<http://www.rsc.org/chemistryworld/Issues/2011/June/BreakingThroughTheBarrier.asp>

With minimal effort, basic bioinformatic research will identify the following facts:

- Additional hyperosmotic substances are sorbitol and polyethylene glycol; a.k.a. Polysorbate 80 and Tween 80®.
- The lung barrier (a defense against bacteria and toxins that could cause pneumonia or cancers) is made from endothelial cells
- Mannitol and sorbitol are used as a sugar substitute in candy and many “sugar free” foods
- Polyethylene glycol is added to most ice cream, sherbets and frozen custard as an emulsifier
- Polyethylene glycol is a primary ingredient in e-cigarette
- Diacetyl, another hyperosmotic, is used in the flavoring of e-cigarettes and regular menthol cigarettes
- Chewing gum typically contains mannitol or sorbitol as well as polyethylene glycol

Summary

Mannitol, sorbitol and polyethylene glycol are hyperosmotic. Accordingly, excessive quantities of these substances may compromise endothelial barriers and, with near certainty, the epithelial GI barrier.

It should be noted that other barriers in the body; e.g. lymphatic, blood brain, brain-spinal cord as well as the lung are comprised of endothelial cells. The lining of the vasculature is also comprised of endothelial cells.

We theorize that today’s pandemic of community-acquired pneumonia is due, in part, to disruption of the lung barrier by a multitude of hyperosmotics used in household products and fragrances. In our opinion, not only must hospitals and long term care facilities ban the use of hyperosmotic products, all patients must be urged to avoid their consumption or exposure upon discharge; i.e. to minimize readmission.

¹ Understanding hyperosmotic: “The fluid flowing through the blood vessels is hyperosmotic and so draws water out of the endothelial cells, causing them to shrink. ”

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Note: The “shrinking of the cells” will compromise the integrity of endothelial barriers.

With near certainty, a large percentage of the rapidly increasing instances of sepsis are attributable to hyperosmotics.

In terms of prevention of chronic diseases for employees and beneficiaries of corporations that use self-insured healthcare programs and all “at risk” insurance initiatives, awareness and education must be initiated.

The following links are provided for use with discussions concerning the need to apply clinical value analysis modeling (CVA) to assess which hyperosmotics are used in the food chain, dry cleaning chemical as well as housekeeping products.

The following links are provided for reference and discussion purposes.

<http://www.mcfip.net/upload/Hyperosmotics%20-%20Cellular%20Disruption.pdf>

[http://www.mcfip.net/upload/E-Cigarettes%20\(Hazardous\)%20WHY.pdf](http://www.mcfip.net/upload/E-Cigarettes%20(Hazardous)%20WHY.pdf)

<http://www.mcfip.net/upload/E-cigarette%20Hazards%20-%20Confirmed.pdf>