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A heuristic point of view on the breathing in the corona virus environment-the "Naïve theory"

Emanuel Gluskin

Ruppin Academic Center, Israel

Physics and mathematics usually are important supporting tools in any system-theory researches, including (since Hermann von Helmholtz) that of biological systems. We would like to introduce these principles, or degrees of freedom, into the discussion of the coronavirus (CV) disease, even though we shall deal only with the specific topic of breathing in the CV environment. As a whole, it is a conceptional proposition, a motivating line of thought. Because of my attempt to see the things phenomenologically, not in the course and terms of a modern biological research, one can find here a basis for a polemical discussion. However, the suggested point of view seems to be useful, and I shall be optimistic, saying the things directly, almost mentor. Besides the general discussion, we shall propose a special covering of some of the Corona Virus molecules, which is purposed to cause an antagonism between these molecules and those uncovered. This, hopefully, can contribute to a decrease of the number N of the CV molecules in the chest (lungs) turns a nonlinear form of the balance equation into a linear time-variant one which the physicists sometime call "parametric equation".

$$\frac{dN}{dt} = -(the\ flow\ out) + (the\ source\ inside)$$

That is

$$\frac{dN}{dt} = -\beta A n + kSn$$

Where A is the frequency of breathing, k is the rate of the internal generation of the CV molecules – the essence of the disease and S is some effective value for the lung's surface. From the requirement of N not to tend to infinity an important condition on A follows. The ill human (or any any animal) has to breathe sufficiently quickly, and for small-size creatures it is easier to satisfy the requirement. A serious problem is that what is done during the breathing with the absolutely needed oxygen is also done with the CV–molecules, while the whole problem is seen as a competition of running of the oxygen and the CV molecules towards the lung's surface.

Speaker Biography

Emanuel Gluskin was born in Leningrad on December the 2nd, 1949. He graduated with an MS Degree in Physical Engineering from the faculty of Radio-Electronics of the Leningrad Polytechnical Institute. After some industrial and research work and experience, he obtained a PhD degree from the department electrical and computer engineering, Ben Gurion University of the Negev. He has published works in electrical engineering and physics journals. His ideal is for some basic system theory to become a part of one's general education, as is the case with basic physics and mathematics.

emanuel15@bezeqint.net