

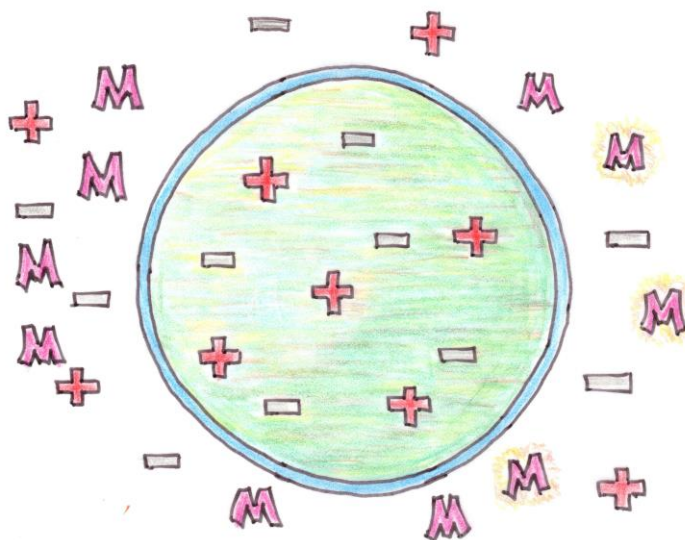
Electroporation

Electroporation, or **electropermeabilization**, is a molecular biology technique in which an electrical field is applied to cells in order to increase the permeability of the cell membrane, allowing chemicals, drugs, or DNA to be introduced into the cell.¹

The term “electroporation” is actually short for **Electric Pore Formation**. The process is actually a quite common laboratory technique used to increase cell membrane permeability so that ions, molecules, and especially genetic material may be inserted into cells that would not normally pass or even be able to pass through an intact cell membrane or other ion channels.

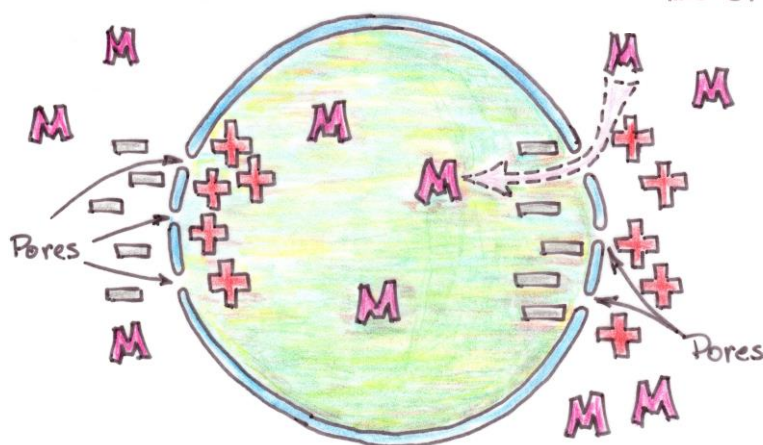
Controlled, millisecond electrical pulses are used to create temporary pores to allow far greater uptake of certain desired materials. This state lasts only for the period of time the pulsed

BEFORE Electrical Field



Note ABSENCE of “M” (molecules) inside cell membrane

DURING Electrical Field



Concentrated electric field induces a voltage across cell membrane reorganizing lipid clusters and water to temporarily form pores allowing “M” into the cell.

charges and field are present and quickly “heals” resealing the cell to its original state prior to application. It is accepted all types of cells (i.e., animal, microorganisms, and bacteria) can be effectively “electroporated”.

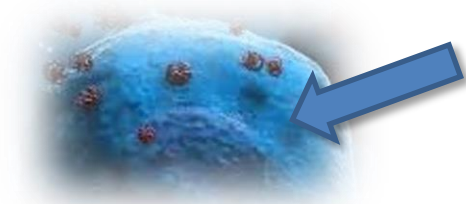
While previously reserved primarily to in-vitro applications within the laboratory, this common yet proven highly effective technique may provide the perfect explanation and method for enhanced

¹ <https://en.wikipedia.org/wiki/Electroporation>

delivery of desperately needed nutrients, supplements, nutraceuticals, and even pharmaceuticals into the cells where they can best be utilized.

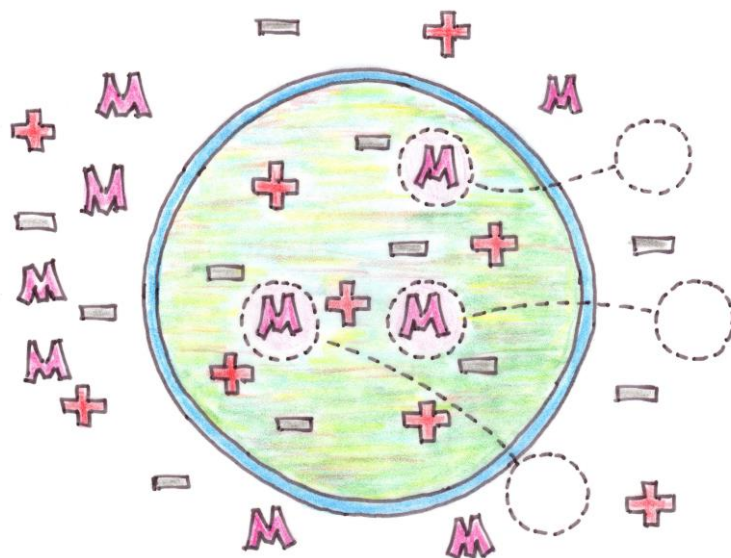
While the most common use of this technique has been largely reserved to the laboratory, those using frequency instruments may be witnessing some of the same positive effects.

When intentional targeting is applied using specific frequency techniques, this may provide the partial explanation for targeted cellular destruction, most specifically pathogens.



Note the pore formation occurring during electrical pulse stimulation. Positive and negative charges collect and arrange themselves with the concentrated fields manipulate and move cell membrane to thin and form a pore in the cell membrane which immediately heals when the pulsed electrical field is removed. The Intact Bilayer is indicative before and after electroporation.

AFTER Electrical Field



Note that some molecules previously outside cell membrane are now inside cell and available for metabolic processes and that field changes have again evenly redistributed

