

international medical stage. International medical graduates might then once again obtain their postgraduate training in the UK and take home glowing reports of the support and training that they have received.

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FURTHER INFORMATION

International Office, Royal College of Physicians.
Information for international doctors.

[www.rcplondon.ac.uk/
International/int_doctors.htm](http://www.rcplondon.ac.uk/International/int_doctors.htm)

Electrical faults and the hydrogen hypercycle

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Epilepsy and other episodic events, whether cardiac events, migraines or moods, were once considered to be sacred diseases reflecting the belief that they warn of an impending energy crisis, comparable to electric lightning storms in the macrocosm. William Harvey linked the need to guarantee the energy supply to fire our metabolism through the newly found circulation with energy cycles of hydrogen oxide found in nature originating in the sun.¹

High-energy acidic diets, whether ketogenic or modified Atkins, ease highly drug-resistant convulsions while a poor diet and alcohol exacerbate them as does extra consumption brought on by stress; even photic stimulation will alter proton use in the retina with secondary effects for the brain. Fits cause an acidosis in part from the muscular contractions and heat production and may relate to their spontaneous termination. Hyperventilation will do the opposite. The distinction between 'real' seizures, other organic clinical pictures and those driven solely by emotional factors is difficult. In the majority of difficult cases, different states overlap.

Anticonvulsants stabilise ion channels while links with the multi-drug transporter systems may relate to their physiological roles in adenosine triphosphate and nucleotide transport that carry hydrogen. The known mutations linked with epilepsy and many other conditions make channels rendered unidirectional transistors unresponsive to homeostatic events. This affects hydrogen bonding and therefore tertiary structures that are so vital to functions from memory in DNA to memory in the brain. Electrical stimulation using vagal or intracerebral electrodes that feed extra electrons into relevant compartments is promising for the treatment of epilepsy and for a surprising range of conditions from Parkinson's

disease to pain to depression and inflammation. At least in muscle, hypertrophy and multiplication of mitochondria can occur regenerating the tissue. More established is the practice of surgically removing epileptogenic foci that may cut out a short circuit that wastes valuable electrons with loss of proton-motive force (see Duncan pp 137–42).

Early systematic intervention in many forms of epilepsy, whether 'pseudo' seizures or surgical candidates before these cycles become engrained in the software, is required.

Truly understanding the sacred diseases and the team effort required to understand underlying mechanisms may lead to conquering many afflictions. Harvey, as a great synthesiser, would be proud if physicians start to see things from an energy perspective and take a systems approach to finding some solutions as we escape from redox slavery. The modern approach to epilepsy is seen as one such beginning.

Reference

- 1 Pagel W. William Harvey and the purpose of the circulation. *Isis* 1951;42:22–38.