

Optics Journal: Editorial

Published 2014/09/01

©Optics Journal (2014)

ISSN: 1936-9808

Excerpt from: F. J. Duarte, *Laser Physicist* (Optics Journal, New York, 2012)©

On modern medicine II

The western public looks at modern medicine, and its practitioners, in excessive reverence. Little do they know that many of the technical marvels in this area are due to advances in physics and engineering. That is, physics and engineering applied to medicine. In this exercise, the physicists and engineers that have made possible these advances get little or no credit. To illustrate this point the reader should think for a moment of a medical profession devoid of optics, lasers, MRI facilities, or advanced electronics.

Perhaps this irreverent attitude towards modern medicine was inherited from my teachers at Macquarie. Dick Makinson, for instance, told us that while at the University of Sydney, he would always check the physics grade of a physician before deciding to pay him a visit. Ron Aitchison, while teaching us how to design and build electronics for electrocardiograms, told us of the many poor patients that were killed in the early days due to faulty circuitry.

Many of today's society health problems are associated with bad societal habits and the expectation is that organized medicine should cure it all. Thus people over indulge, over consume, engage in risky behavior, and then expect the taxpayer to take care of the mess. Add to this some widespread tactical problems, such as poor diagnoses, unnecessary surgery, erroneous surgery, over use of antibiotics, rampant hospital infections, and a horrendous reality emerges.

In regard to unnecessary surgery: it is my opinion that some medical practitioners today don't even take seriously the Hippocratic Oath ("never do harm") anymore and prefer to promote risky surgeries over safer less costly alternatives.

Additional problems include the nasty side effects associated with many of the chemistry-based pharmaceuticals, the so called "medicines." Also, treatments such as cancer chemotherapy are borderline barbaric. One should also question the inability of the medical profession to come up with cures to wide spread diseases such as diabetes and the common cold.

Given the high cost of modern medicine, and the increasing numbers requiring care, western societies face a daunting dilemma. In this regard, people should be encouraged to take responsibility of their own health. Governments should be marginalized from decisions that belong to individuals and their immediate families. The reality is that those individuals that are better informed, have an edge.