

June 1998 Issue | Kenneth Bock, M.D.

<http://jeffreybland.com/knowledgebase/june-1998-issue-kenneth-bock-m-d/>

[DOWNLOAD AUDIO](#) |

Welcome to Functional Medicine Update™ for June, 1998. I recently read an article in the *Journal of the American Medical Association*, "Incidence of Adverse Drug Reactions in Hospitalized Patients," that wove together many things from the past into a single theme. It analyzed the influence of medications in hospitalization considered to be the best of all situations. In the study, trained professionals administered drugs to patients under controlled conditions, in proper amounts and on correct dose schedules.

The results of this study are staggering. They suggest that more than 100,000 deaths a year— somewhere between 76,000 and 137,000, with an average of 106,000 in 1994— are a consequence of adverse reactions to prescribed drugs used in a hospital setting. The number of deaths would make it the fourth to sixth leading cause of death in the United States, following heart disease, stroke, and cancer.

Those are compelling statistics. What are their implications, and where might our healthcare delivery system be headed based upon this kind of observation? The effect this paper had on me is similar to that of the Eisenberg paper on unconventional medicine use in the United States, which I reviewed in *FMU* a number of years ago. That paper had major effects on the evolution of alternative medicine over the last six years. Eisenberg reported that a third tier of medical use was occurring much more frequently than had been previously thought. It constituted more than \$10 billion of out-of-pocket expenditures on healthcare services not covered under normal insurance reimbursement profiles.

Most patients were not even telling their doctors about the alternative services they were seeking. Those visits, by 25 to 30 percent of the patients in the United States, amounted to a greater number than visits to family doctors. This article alerted people in the medical community to the fact that a revolution was afoot, a dynamic of change in thinking about health care. Eisenberg's article affected everyone who read the *New England Journal of Medicine* and, by a ripple effect, the wider political, economic, and social world of medicine and healthcare consumers. It created interest within the medical community in complementary, nutritional, and functional medicine.

The paper in *JAMA*, and the accompanying editorial, "How Worried Should We be?", states that certain drug families appear to be associated with a high mortality risk. Standing out among these drugs are pain medications, antibiotics, cardiac drugs, and drugs that alter brain biochemistry. These four families of drugs are commonly used, both prophylactically and therapeutically, not just in hospitalized patients, but also in ambulatory patients for management of symptoms. The paper does not address all the other adverse symptoms that may have occurred in people who went home and took these medications, whose results were never reflected in the statistics.

According to the editorial, we are in a conundrum. You obviously have to use some of these drugs in seriously ill patients, but if they involve significant risk of adverse drug reactions, how do you use them safely, and under what conditions? How do you minimize the potential for risk? These questions pose a tremendous challenge to the way medicine is practiced today, which is on the rapier of the prescription pad.

INTERVIEW TRANSCRIPT

Clinician of the Month:
Kenneth Bock, M.D.
Rhinebeck Health Center
108 Montgomery St.
Rhinebeck, NY 12572
Phone: 914.876.7082
Fax: 914.876.4615

This month's Clinician of the Month is Dr. Kenneth Bock, director of the Rhinebeck Health Center in Rhinebeck, New York. He attended undergraduate school at the State University of New York at Buffalo, and did his training at the University of Rochester School of Medicine. He has been a preceptor and clinical professor of medicine, and he has been instrumental in assisting the development of integrative medicine. He brings a clinician's perspective because he is with patients every day, dealing with real problems, trying to balance the integrative medicine model with the changes in the reimbursement system through managed care. Dr. Bock has written a book, *The Road to Immunity*, which provides a comprehensive overview of immune modulation, an area in which he has great skill and clinical experience.

JB: Dr. Bock, what got you into this field and how has your practice evolved over the last 15 years?

KB: I first got into this field when I was board certified in family practice, but in college, while studying nutrition, I became a vegetarian. Throughout my residency, while studying nutrition, people referred to me as "Bock with his zinc," and "Bock with his vitamin C." In terms of the immune system, I attended a conference in San Francisco that dealt with the relationship between T cells and B cells, immune dysregulation, and the immune system. That was what really got me interested in the field.

As you are aware, once you delve into the underpinnings of what's going on beyond drugs and symptom relief, you're caught and there's no going back. For me, it's been a 15-year journey in dealing with new perspectives in chronic illness. I've focused on the immune system. Many modern-day illnesses—cancer, chronic fatigue syndrome, fibromyalgia, autoimmune disease, and chronic recurrent infections—are mediated by the immune system. The immune system is a model for overall health.

JB: A recent issue of the *Journal of the American Medical Association* contained a report on adverse reactions to drugs used in the hospital environment. Supposedly, hospitals offer the most controlled way that drugs are used, so one would expect to see the least incidence of adverse side effects of drugs in that environment. It was estimated, however, that adverse drug effects may be the fourth leading cause of

death in America, after heart disease, stroke, and cancer. Knowing that a lot of medications used to handle immune problems mask symptoms rather than treat the cause, I'm sure you conduct some education with your patients when you start talking about immune modulation and the drug-based model they are familiar with. Would you tell us how you handle that?

KB: In the immune system, it clearly represents immune balance. So many people talk about immune stimulation, but it's not only that. There are times when the immune system is overstimulated and needs to be quieted down or returned to homeostasis. The immunosuppressive agents people take for certain types of illnesses, or nonsteroidal anti-inflammatories they take for chronic inflammatory conditions, have ramifications in terms of increasing intestinal permeability and causing other gastrointestinal side effects. It's necessary to pay attention to that—not just the physical response to these agents, but the chronic inflammatory response.

In my book I describe the way the field of psychoneuroimmunology relates to the field of immunology and chronic illness. Consider the book's subtitle, *How to Survive and Thrive in a Toxic World*. I don't feel we are toxic deep down in ourselves; in fact, I feel there is a purity in there. Unfortunately, because of the number of human organisms living in the world, it is becoming more and more a toxic world. There is no question about that in terms of chemical exposure. Look at some of the statistics. The petrochemical industry originated in the 1940s, starting with one billion pounds of chemicals. By the end of the 1980s there were 500 billion pounds of petrochemicals. Where are they all going?

An EPA study on tissue fat biopsies showed that 100 percent of the subjects tested showed styrene and xylene in their fat samples. In essence, our tissues are becoming toxic chemical dumps. The whole concept of detoxification is so important. It all fits together. We have been bombarded by physical toxins.

Now we live in a society being bombarded by constant psychological and psychosocial stress. Those stresses have ramifications. They are mediated not only through the sympathetic nervous system and the adrenal medulla secreting epinephrine, but more the longstanding neuroendocrine effects resulting in the hypersecretion of cortisol. When we do adrenal stress indexes in our patients, especially those with chronic illness, we frequently see elevated levels of cortisol. When we treat patients with autoimmune disease from a conventional point of view, they get high doses of cortisone or prednisone. We see a lot of immunosuppression. We have to try to remedy that from a nutritional and energetic point of view

JB: We still tend to think that many diseases result from our having the bad luck of being exposed to something. The concept of the receptivity of the organism, in other words ourselves in our environment, plays a very small role in that thinking. One example of this type of thinking that has been in the news recently is Lyme disease and exposure to ticks carrying the illness. I haven't heard much on the other side of the story. What about the receptivity and immune system response of the host who is exposed to the tick? Would you tell us about the etiology of Lyme disease and how you've viewed it in your practice?

KB: Lyme disease, at least in the chronic stages, is a multisymptom, multisystem disorder caused by the bite of the tick, *Ixodes scapularis*. It's caused by a spirochete, much like the spirochete that causes syphilis; in this case it's the *Borrelia burgdorferi*. It is injected into the skin, travels very quickly into the bloodstream, and disseminates quite rapidly into the central nervous system. That is why we may see neurological symptoms quite early in the disease.

The hallmark of the illness is a rash that can occur within a couple of days or within a month of contact with the tick. It's a bull's-eye rash that expands centrifugally and gets quite big, usually, with a substantial clearing in terms of the bull' eye. Seeing that rash dictates early, aggressive treatment because that is the one way we get what, hopefully, we call a cure.

Bibliography

1. Lazarou J, Pomeranz BH, Corey PN. Incidence of adverse drug reactions in hospitalized patients. *JAMA*. 1998;279(15):1200-1205.
2. Eisenberg DM, Kessler RC, Foster C, Norlock FE, Calkins DR, Delbanco TL . Unconventional medicine in the United States. *N Engl J Med*. 1993;328(4):246-252.
3. Bates DW. Drugs and adverse drug reactions. How worried should we be? *JAMA*. 1998;279(15):1216-1217.
4. Hathcock JN. Vitamins and minerals: efficacy and safety. *Am J Clin Nutr*. 1997;66:427-437.
5. Podmore ID, Griffiths HR, Herbert KE, Mistry N, Mistry P, Lunec J. Vitamin C exhibits pro-oxidant properties. *Nature*. 1998;392:559.
6. Kim YI. Short-chain fatty acids in ulcerative colitis. *Nutr Rev*. 1998;56(1):17-24.
7. Cummings JH. Short-chain fatty acid enemas in the treatment of distal ulcerative colitis. *Eur J Gastroenterol Hepatol*. 1997;9:149-153.
8. Johansson K, Bogdanovic N, Kalimo H, Winblad B, Viitanen M. Alzheimer's disease and apolipoprotein E e 4 allele in older drivers who died in automobile accidents. *Lancet*. 1997;349:1143-1144.
9. Yaffe K, Sawaya G, Lieberburg I, Grady D. Estrogen therapy in postmenopausal women. *JAMA*. 1998;(279(9):688-695.
10. Levick SE. Dementia from aluminum pots? *N Engl J Med*. 1980;299:164.
11. Markesbery WR, Ehmann WD. Trace elements in dementing disorders. *Nutritional Modulation of Neural Function*. Academic Press, Inc.;1988:179-190.
12. Exley C. Does antiperspirant use increase the risk of aluminum-related disease, including Alzheimer's disease? *Mol Med Today*. 1998;4(3):107-109.
13. Pendergrass JC, Haley BE, Vimy MJ, Winfield SA, Lorscheider FL. Mercury vapor inhalation inhibits binding of GPT to tubulin in rat brain: similarity to a molecular lesion in Alzheimer diseased brain. *NeuroToxicol*. 1997;18(2):315-324.
14. Steventon G, Heafield MT, Waring R, Williams AC. Xenobiotic metabolism in Parkinson's disease. *Neurol*. 1989;39:883-887.
15. Leatherland JF. Changes in thyroid hormone economy following consumption of environmentally contaminated Great Lakes fish. *Toxicol Ind Health*. 1998;14(1/2):41-57.
16. Brouwer A, Morse DC, Lans MC, et al. Interactions of persistent environment organohalogens with the thyroid hormone system: mechanisms and possible consequences for animal and human health. *Toxicol Ind Health*. 1998;14(1/2):59-84.
17. Hauser P, McMillin JM, Bhatara VS. Resistance to thyroid hormone: implications for neurodevelopmental research on the effects of thyroid hormone disruptors. *Toxicol Ind Health*. 1998;14(1/2):85-101.
18. MacLusky NJ, Brown TJ, Schantz S, Seo BW, Peterson RE. Hormonal interactions in the effects of halogenated aromatic hydrocarbons on the developing brain. *Toxicol Ind Health*. 1998;14(1/2):185-208.
19. Scheen AJ, Lefebvre PJ. Oral antidiabetic agents. *Drugs*. 1998;55(2):226-234.

20. Johnston PS, Feig PU, Coniff RF, Krol A, Davidson JA, Haffner SM. Long-term titrated-dose α -glucosidase inhibition in non-insulin-requiring Hispanic NIDDM patients. *Diabetes Care*. 1998;21(3):409-415.
21. Paolisso G, D'Amore A, Giugliano D, Ceriello A, Varricchio M, D'Onofrio F. Pharmacologic doses of vitamin E improve insulin action in healthy subjects and non-insulin-dependent diabetic patients. *Am J Clin Nutr*. 1993;57:650-656.
22. Sanchez-Lugo L, Mayer-Davis EJ, Howard G, et al. "Insulin sensitivity and intake of vitamins E and C in African American, Hispanic, and non-Hispanic white men and women: the Insulin Resistance and Atherosclerosis Study (IRAS)." *Am J Clin Nutr*. 1997;66:1224-1231.
23. Meydani SN, Beharka AA. Recent developments in vitamin E and immune response. *Nutr Rev*. 1996;56(1):S49-S58.
24. Riedel M, Straube A, Schwarz MJ, Wilske B, Müller N. Lyme disease presenting as Tourette's syndrome. *Lancet*. 1998;351(9100):418-419.
25. Komaroff AL. A 56-year-old woman with chronic fatigue syndrome. *JAMA*. 1997;278(14):1179-1185.
26. Baschetti R, Chester AC, Devitt NF, Komaroff AL. Chronic fatigue syndrome. *JAMA*. 1998;279(6):431-433.
27. Rigden S, Barrager E, Bland JS. Evaluation of the effect of a modified entero-hepatic resuscitation program in chronic fatigue syndrome patients. HealthComm Functional Medicine Research Center, Gig Harbor, WA. March 6, 1997. Research Rpt No. 103

p>