



Dynamic Chiropractic – September 6, 1999, Vol. 17, Issue 19

Immunization: What Do the Data Really Show?

By Lon Morgan, Fred Colley and Mitchell Haas, DC, MA

Earlier in the year, *Dynamic Chiropractic* published a chiropractor's perspective on vaccination/immunization issues.¹ In that article, Joel Alcantara, DC, responded to certain issues raised in a prior article by Colley, Morgan and Haas.²

We thank Dr. Alcantara for his reply and feel it appropriate to respond further to issues he raised. (*Editor's note:* Authors Morgan, Colley and Haas were prompt in their rebuttal to Dr. Alcantara's Jan. 26, 1999 article. We apologize to the authors for the delay in printing this response.) We agree with Dr. Alcantara's views on the risks of cervical manipulation being low. We also agree with Dr. Alcantara that cervical manipulation is unacceptable as a preventive measure, but hopefully he realizes that many of our chiropractic colleagues do not support his views. Indeed, one of the most common criticisms leveled at chiropractic is that we endlessly treat asymptomatic patients with no credible criteria for doing so.³

Dr. Alcantara states that whether to adjust a spine is for him "based on subluxation findings." Unfortunately, this seemingly reasonable criteria is fraught with problems, as more and more of our own peer-reviewed publications are criticizing the abysmal status of defining "subluxation," and whether such an entity even exists.³⁻⁵ While Dr. Alcantara relied on Dr. Gatterman's work⁶ to support his ideas of "subluxation," Dr. Nelson makes a persuasive argument demonstrating the circular reasoning and lack of credibility for the whole concept.⁴ In fact, it's gotten to the point where serious calls are being increasingly made to abandon this vague and vacuous term altogether.⁷ Thus, Dr. Alcantara's own criteria for appropriateness of treatment, whether it be spinal adjusting or immunization, is open to question.

Dr. Alcantara attempts to make a distinction in appropriateness between whether a vaccine, such as rabies, is prophylactic or therapeutic. Such distinctions, while important to the individual, are irrelevant to the general discussion of vaccine effectiveness and safety. The point is simply that certain vaccines may fill either role under appropriate circumstances. While prophylactic rabies immunization is not indicated in the U.S., the

disease still causes 40,000 to 100,000 human deaths annually in other countries.⁸ New prophylactic rabies vaccines are being developed to meet the local needs of countries like Vietnam where the disease is endemic.⁹

The next point to be emphasized is that no health care intervention, including spinal adjusting and immunization, is 100% effective or 100% safe. Extremely rare adverse events may occur in either of these services. Increasingly, the addition of newer, larger, more sensitive epidemiological studies, with careful control of potential confounders, is causing a constant downward reassessment of vaccine risks. A classic example is the 1995 Mitchell study in New Zealand which covered 78% of all births in the entire nation over a three-year period. Careful control of confounders, plus autopsy verification, led to the clear conclusion that vaccinated children experienced an incidence of SIDS lower than unvaccinated children.¹⁰

Thus, Dr. Alcantara correctly notes that the 1994 Institute of Medicine report favored a causal relation between OPV (oral polio vaccine) and GBS (Guillain-Barre syndrome)¹¹ (p.200). He failed to note, however, that the *Lancet* article by Salisbury was an update published in 1998. The *Lancet* study represents four additional years of research examining whether an OPV/GBS association exists or not. The *Lancet* article is quite clear: "... the mean weekly incidence of the disorder (GBS) did not show significant seasonal variation, and there was no temporal association with mass OPV immunisation campaigns." Further, while some increases were noted in the rate of GBS, the increase began before OPV immunization programs had started.¹²

The above clearly demonstrates a common trend: further research is demonstrating that many prior concerns about vaccine safety are not supported by later, better research.

Dr. Alcantara further makes this remarkable claim: "To this day, an effective vaccine has not been developed against cholera." We refer Dr. Alcantara to Wiedermann's study of the CVD103HgR cholera vaccine which is "... well tolerated and accepted by travelers."¹³

We also refer him to Sack's account of the Peru-15 cholera vaccine which was "... well tolerated at all dose levels, and it stimulated high levels of vibriocidal antibodies..."¹⁴ Dr. Alcantara might also consult Kilhamn's review of an oral inactivated B-subunit-whole-cell cholera vaccine wherein the "... vaccine induced significant mucosal immunoglobulin A (IgA) antibody responses ..." ¹⁵ According to Tackett, the live oral El Tor *Vibrio cholerae* O1 vaccine has a single dose efficacy of 80.9%.¹⁶ Also, Bergquist tested a two-dose nasal cholera vaccine and found that "... intranasal vaccination of humans with CTB induces

strong systemic and mucosal antibody responses."¹⁷

Dr. Alcantara expressed concern over measles immunization. In the process, he ignores the documented evidence that before measles vaccine was licensed in 1963 an average of 400,000 cases were reported each year in the United States. Immunization has reduced this high measles incidence in the U.S. by 99%.^{18,19} Certainly a very few children fail to achieve antibody seroconversion, but the point is: most do. For example, 33 confirmed measles cases were recently reported in a highly vaccinated school population of over 2,000 in Alaska. All but one of these cases had received only one dose of measles vaccine. Less than 5% of children who receive one dose fail to develop immunity. To address this issue, the Advisory Committee on Immunization Practices and the American Academy of Pediatrics now recommends a two-dose measles series for children over 12 months of age. Disease incidence since 1989 under the two-dose regimen, and with increased vaccine coverage, is now minuscule,^{18,20} especially compared to the millions of cases that occurred prior to the advent of immunization.

The susceptibility of unvaccinated populations to measles was dramatically demonstrated in recent severe outbreaks in unvaccinated populations. One outbreak occurred in Christian Science college students in the midwest,²¹ another in unvaccinated preschool-age children in Philadelphia in 1990, causing six deaths.²²

We will further point out to Dr. Alcantara that these particular college students had high hygiene, nutrition, sanitation and lifestyle standards and still experienced a massive measles outbreak that was stopped only after an emergency measles vaccination program was implemented.

The severity of measles was demonstrated by Abramson in a series of 15 children hospitalized with measles (none vaccinated). The children experienced one or more instances of severe hypoxemia, respiratory distress syndrome, spontaneous pneumothorax, empyema, encephalopathy, shock, sepsis, hypocalcemia, thrombocytopenia and coagulopathy. Complications included fibrosing alveolitis, brain infarct, thrombus formation and nosocomial sepsis. Four patients had long-term sequelae (chronic lung disease, subacute sclerosing panencephalitis, hemiplegia, and partial amputation of a limb).²³ All of these complications were preventable with simple immunization!

A question was also raised as to why three industrialized countries (Japan, Sweden, England) temporarily reduced pertussis immunization in the 1970s. The answer is simple: they noted, as have others, the temporal association of certain childhood ailments in the same time frame that immunizations occur. At that time, epidemiological data to know for certain whether vaccines were involved was lacking. A small part of the

national immunization programs (the pertussis component) was temporarily suspended until more data was available.

The interruption of pertussis immunization brought no benefit. On the contrary, pertussis epidemics soon followed in all three countries. Subsequent surveys with improved epidemiological design have provided convincing evidence that the earlier fears were unfounded. Without exception, these countries have all reinstated full pertussis immunization programs! In fact, Sweden and Japan have been in the forefront of additional vaccine development and testing.²⁴⁻²⁶

In Dr. Alcantara's first paper, he gave the distinct impression he felt only inner-city poor children should be immunized, while those more fortunate should rely on hygiene and nutritional factors.²⁷ The college student experience with measles pretty well refutes that notion.²¹ Perhaps Dr. Alcantara misunderstood. We don't question the lowered immunization status of inner-city children. We are already well aware of that unfortunate circumstance. What we challenge is any implication that immunization should be offered only to inner city children. If it is Dr. Alcantara's position that inner-city children do deserve the same high immunization levels as their suburban counterparts, then we agree with him.

On the other hand, if it is his position that only inner-city children should be immunized, then we emphatically disagree. If this is the case, we will point out to Dr. Alcantara that his references noting the under-immunization status of inner-city children do not support the notion that they are the only ones deserving of immunization. In fact, such a position has no credible support anywhere in the literature.

We see no reason why all children should not receive equal immunization benefits. After all, Dr. Alcantara can provide no evidence whatsoever that measles, or pertussis, or the other common vaccine preventable diseases strike only inner-city children.

However, it is these same under-immunized inner-city children who do experience a much higher documented incidence of asthma,²⁸ thus refuting those who have suggested vaccination causes asthma. Further evidence that vaccination is not associated with asthma was provided by Nilsson and Kemp.^{29,30}

It further seems Dr. Alcantara has grossly misinterpreted data regarding the outbreak of communicable diseases in the former USSR. He cites the JAMA study by Notzen as support. Unfortunately, Notzen does not even discuss immunization or childhood diseases. Notzen's article focuses entirely on the decline in adult life expectancy due to adult circumstances: alcoholism, heart disease, cancer, suicide, etc., especially

in the 25 to 64 year age group.³¹ The Notzen article has nothing to do with immunization, nor does the article attribute the decline in Russian adult life expectancy to communicable childhood disease. Alcantara's use of this citation in an attempt to discount the importance of childhood immunization is inappropriate, irrelevant and misleading.

We suggest Dr. Alcantara instead consult Galazka³² or Bricaire.³³ They note that the massive outbreaks of diphtheria in children in the former USSR are attributable directly to a disrupted immunization program. Another very detailed source with the same conclusion is the official MMWR report on the USSR diphtheria epidemic.³⁴

From this and numerous other instances it appears that Dr. Alcantara engages in the common practice of "selective evidence" noted by Keating³⁵ (p. 3). Keating describes this as the process of "refusal to consider theories or data which conflict with favored theory." Herein "articles selected for a review of the literature omit and/or minimize unfavorable studies and emphasize favorable information." We do acknowledge and appreciate that, while Dr. Alcantara appears biased in his selection and usage of research material, he has avoided using the unprofessional anti-vaccination literature written by laymen and so commonly used by vaccine adversaries.

Reflexive opposition to immunization has been accepted as dogma by some chiropractors since the beginning of their profession. As the chiropractic profession moves more into evidence-based health care, this position is increasingly difficult to rationalize. A "double standard" position is evident. Chiropractic care on rare occasions produces injury: stroke, fracture, disc herniation, etc., but chiropractors don't oppose spinal adjustments as a result. Shouldn't immunization have an equal standard applied? Although immunization produces very rare injuries, there is overwhelming evidence to show that it has clearly saved millions of children's lives by preventing a variety of infectious diseases and furthermore it is very cost effective.

So while Dr. Alcantara appears to favor a "holistic approach," including chiropractic adjustments, as a solution to communicable childhood disease, he is unable to offer a shred of credible evidence that such an approach would have the slightest effect on actual incidence of such diseases. To suggest otherwise is naive wishful thinking. Such an approach would also create another double standard: using chiropractic adjustments as supposed prophylactic treatment against communicable disease would involve extensive treatment of asymptomatic patients, something Dr. Alcantara has already declared to be unacceptable.

Immunization, on the other hand, can demonstrate the complete eradication of smallpox, a disease that has killed hundreds of millions of people.³⁶

Polio, the greatcrippler, has been eliminated from most of the world. It is present now mostly in isolated pockets in southern Asia and sub-Saharan Africa. With continued effort and barring major interruptions of immunization programs, it is possible we will shortly see the total eradication of polio.³⁷ While measles still causes a million childhood deaths annually, progress is being made. Again, those areas with the lowest vaccination coverage (Africa) are the same ones still experiencing epidemics of the disease.³⁸ Jefferson has examined the numerous erroneous notions that tried to link vaccines to sudden infant death syndrome, pediatric asthma, autism, inflammatory bowel disease, and permanent brain damage. All of these claims have been shown to be unfounded.

More recently, concerns involving type 1 diabetes have been shown to also have no association with vaccines.³⁹ Cyclical vaccine scares are typified by a purported causal link being claimed, often by one individual or small group; the association is not confirmed by peers; no concern is given for adverse effects on vaccine programs; the press will sensationalize the claim; finally, follow-up studies that refute the original claim are seldom reported in the media.³⁹

Many hundreds of studies are produced annually from all over the world supportive of immunization. Every country on planet earth has a pro-immunization policy. It's a policy that transcends differences in politics, race, geography, ethnicity, religion, age, and sex. It is one thing the whole world agrees on. Chiropractic's early attitude towards immunization was initiated by an unfortunate misperception. This misperception has been perpetuated by an uncritical acceptance of erroneous and sensationalized misinformation. We believe what we believe because we believe it. These beliefs come not from evidence, but from stubborn adherence to outdated tradition. This hostility toward immunization is unwarranted, unsupported, unscientific and professionally irresponsible.

References

1. Alcantara J. Vaccination issues: a chiropractor's perspective. *DC* Jan 26, 1999.
2. Colley F, Morgan L, Haas M. Vaccination issues: putting them in proper perspective. *DC* May 18, 1998.

3. Leboeuf-Yde C. How real is the Subluxation? A Research Perspective. *J Manipulative Physiol Ther*, Sept. 21, 1998;492-4.
4. Nelson C. The Subluxation Question. *J Chiro Humanities*, 1997;7:46-55.
5. O'Malley J. How real is the subluxation? *J Manipulative Physiol Ther*, 1997;20:482-7.
6. Gatterman M. *Foundations of Chiropractic. Subluxations*. 1995, St. Louis: Mosby.
7. Seaman D. Joint Complex Dysfunction, a novel term to replace subluxation/subluxation complex: etiological treatment considerations. *J Manipulative Physiol Ther*, Dec. 1997;20:634-44.
8. Rupprecht C. *Emerging Infectious Diseases. The Ascension of Wildlife Rabies: A Cause for Public Health Concern or Intervention?* 1995, Atlanta: CDC.
9. Lang J, Duong G, Nguyen V, et al. Randomised feasibility trial of pre-exposure rabies vaccination with DTP-IPV in infants. *Lancet*, June 1997;349:1663-5.
10. Mitchell EA, Stewart AW, Clements M. Immunisation and the sudden infant death syndrome New Zealand Cot Death Study Group. *Arch Dis Child*, Dec. 1995;73:498-501.

11. Stratton K, Howe C, R Johnston. *Adverse events associated with childhood vaccines. Evidence bearing on causality*. National Academy Press, Washington, D.C., 1994.
12. Salisbury D. Association between oral poliovaccine and Guillain-Barre syndrome? *The Lancet*, 1998;351:79-80.
13. Wiedermann G, Kollaritsch H, Jeschko E, et al. Adverse events after oral vaccination against cholera with CVD103-HgR. *Wien Klin Wochenschr*, May 22, 1998;110:376-8.
14. Sack D, Sack R, Shimko J, et al. Evaluation of Peru-15, a new live oral vaccine for cholera, in volunteers. *J Infect Dis*, July 1997;176:201-5.
15. Kilhamn J, Brevinge H, Svennerholm A, Jertborn M. Immune responses in ileostomy fluid and serum after oral cholera vaccination of patients colectomized because of ulcerative colitis. *Infect Immun* Aug. 1998;66:3995-9.
16. Tackett C, et al. Volunteer studies investigating the safety and efficacy of live oral El Tor *Vibrio cholerae* O1 vaccine strain CVD 111. *Am J Trop Med Hyg*, May 1997;56:533-7.
17. Bergquist C, et al. Intranasal vaccination of humans with recombinant cholera toxin B subunit induces systemic and local antibody responses in the upper respiratory tract and the vagina. *Infect Immun*, July 1997;65:2676-84.

18. Staff. Measles prevention: recommendations of the immunization practices advisory committee (ACIP). In: *Recommendations of the Advisory Committee on Immunization Practices (ACIP)*. April 4, 1997, CDC, Dept of Health and Human Services.
19. Staff. Measles, mumps, and rubella vaccine use and strategies of elimination of measles, rubella, and congenital rubella syndrome and control of mumps. In: *Recommendations of Advisory Committee on Immunization Practices (ACIP)*. CDC, U.S. Dept of Health and Human Services, May 22, 1998;47.
20. Staff. Transmission of measles among a highly-vaccinated school population -- Anchorage, Alaska, 1998. *MMWR*, Jan 8, 1999;47:1109-1111.
21. Staff. Outbreak of measles among Christian Science students -- Missouri and Illinois, 1994. *MMWR*, July 1, 1994.
22. Rodgers D, Gindler J, Watkinson, Markowitz L. High attack rates and case fatality during a measles outbreak in groups with religious exemption to vaccination. *J Pediatr Infect Dis*, Apr 1993;12:288-92.
23. Abramson O, Dagan R, Tal A, Sofer S. Severe complications of measles requiring intensive care in infants and young children. *Arch Pediatr Adolesc Med*, Nov. 1995;149:1237-40.
24. Trollfors B, Taranger J, Lagergard T, et al. A Placebo-Controlled Trial of a Pertussis-Toxoid Vaccine. *NEJM*, Oct. 19,1995;333.

25. Aoyama T. Acellular pertussis vaccines developed in Japan and their application for disease control. *J Infect Dis*, Nov. 1996; 174 Suppl 3:S264-9.
26. Asano Y. Varicella vaccine: the Japanese experience. *J Infect Dis*, Nov. 1996;174 Suppl 3.
27. Alcantara J. Issues in chiropractic pediatrics: vaccination. *DC*, Feb. 23, 1997.
28. Kattan M et al. Characteristics of inner-city children with asthma: the National Cooperative Inner-City Asthma Study. *Pediatr Pulmonol*, Oct. 1997;24:253-62.
29. Nilsson L. Lack of association between pertussis vaccination and symptoms of asthma and allergy. [Letter]. *JAMA*, 1996;275:760.
30. Kemp T, Pearce N, Fitzharris P, et al. Is infant immunisation a risk factor for childhood asthma or allergy? *Epidemiology*, 1997; 8:678-80.
31. Notzon F, Komarov Y, Ermakov S, et al. Causes of declining life expectancy in Russia [see comments]. *JAMA*, Mar. 1998;279:793-800.
32. Galazka A, Robertson S, Oblapenko G. Resurgence of diphtheria. *Eur J Epidemiol*, Feb. 1995;11:95-105.

33. Bricaire F. [Diphtheria: apropos of an epidemic (editorial)]. *Presse Med*, Mar. 1996;25:327-9.
34. Staff. Update: diphtheria epidemic -- new independent states of the former Soviet Union, January 1995-March 1996. *MMWR*, Aug. 1996; 45:693-697.
35. Keating J. Faulty logic and nonskeptical arguments in chiropractic. *Skeptical Inquirer*, 1997;21.
36. Barquet N, Domingo P. Smallpox: the triumph over the most terrible of the ministers of death. *Amer Coll Phys*, 1997;127:635-42.
37. Staff. Progress toward global eradication of poliomyelitis, 1997. *MMWR*, May 29, 1998;47:414-9.
38. Staff. Progress toward global measles control and regional elimination, 1990-1997. *MMWR*, Dec 11, 1998;47:1049-1054.
39. Jefferson T. Vaccination and its adverse effects: real or perceived. *BMJ*, 1998;317:159-60.



Page printed from:

http://www.chiroweb.com/mpacms/dc/article.php?id=36252&no_paginate=true&p_friendly=true&no_b=true