

FOWL!!

Bird flu:

It's Not What You Think

by Dr. Sherri Tenpenny

*Middleburg Heights, Ohio 44130
USA*

www.DrTenpenny.com

Starting Premises:

- **Why are so many farm chickens sick?**
 - **What has made these birds more susceptible to the effects of the H5N1 virus?**
- **Why are droves of migratory birds dying across the globe?**
- **Who wants all the chickens dead?**
 - **Whose interests would be most served by elimination of the independent farmer's lifestyle and means for supporting his family?**
- **What's behind the nearly blank check being handed to the drug companies? Or better, *who* is behind it and *why* are they pushing for mandatory vaccination?**
- **Why are the humans cases clustered in Southeast Asia?**
- **How are the global conditions today similar to those at the time of the 1918 Great Pandemic?**

A short background of the Avian Flu

- Influenza A viruses affect many different species,
- Influenza A viruses are divided into subtypes based on different combination of two surface proteins called antigens.
 - “Hemagglutinin,” abbreviated (H) or (HA)
 - “Neuraminidase,” abbreviated (N)
- “H” and “N” antigens provide the basis for classifying and naming the many subtypes of type A viruses.
- Fifteen different (H) antigens (referred to as H1 to H15) and nine different (N) proteins (referred as to N1 to N9) are commonly known to exist.
- Viruses with H5, H7 and H9 on their surfaces are called **Highly Pathogen Avian Influenza Viruses**, or HPAI for short

A short background of the Avian Flu

- **The first highly pathogenic avian influenza virus was isolated on the Italian peninsula in 1878.**
- **Records show that since 1959, there have been 21 reported outbreaks of highly pathogenic avian influenza worldwide.**
- **Avian influenza outbreaks have occurred in the U.S., with varying degrees of severity, for many years.**

Assumptions about the “pandemic virus”

- It has been long held that the 1918 virus arose from the process of reassortment: Humans, birds and pigs living close enough together that the viruses had the opportunity to “swap genes.”
- New assumption: The 1918 virus as a bird flu virus that “jumped species” and directly infected humans. (*Nature and Science*, 2005)
 - Conveniently timed to legitimize worries about the “coming pandemic.”

Past Pandemics

- Ten influenza pandemics, defined by clinical and epidemiological records, have occurred in the last 300 years.
- The Spanish Flu.....1918-1919
- The Asian Flu.....1957-1958
- The Hong Kong Flu.....1968-1969

Overlooked Lessons from Past Pandemics

- The general health of those who contracted influenza is unknown.
- Healthcare technology has advanced, certainly leading to increased chances of survival today.
- Malnutrition played a role in the 1918 pandemic.
- Vaccination could have contributed to influenza deaths.
 - 1918: Smallpox, typhoid, diphtheria, others
 - 1957: Polio vaccination campaign in 1954
 - 1968: Pre-deployment vaccines

Keeping the Heat on the Hype

by Risk Communication experts, Peter M. Sandman, PhD. & Jody Lanard, M.D

1. Start where your audience is
2. Don't be afraid to frighten people
3. Acknowledge uncertainty
4. Share dilemmas; get people to think that they are participating
5. Give people something to do
6. Be willing to speculate—like hurricane predictions
7. Don't get caught in the numbers game
8. Stress magnitude more than probability— “it **IS** coming”
9. “Guide adjustment reactions” to a “new normal”
10. Advise to govts to “aim for total candor”

Vaccines ...

*What's coming through that
needle?*

The “Regular” Flu shot

- Starts with the inoculation of viruses into 500,000 eggs daily for up to 8 months
 - Aventis uses 100s of millions of eggs each year
 - Time and labor intensive
- The viruses in the vaccine are recombinants
 - Virus that is in circulation is combined with a virus that grows well in eggs
 - Not the ‘exact match’ we are lead to believe

Post-egg production

- Formaldehyde
- Triton X100
- Sucrose
- Gelatin
- Tri-butylphosphate
- Polysorbate 80 (Tween80™)
- Resin
- Gentamicin
- Thimerosal

Think this is disgusting?

It gets worse...

...what else is in those eggs?

“Specific Pathogen Free” eggs are not the same as “Pathogen Free eggs”

“...although it is not possible to produce a completely uncontaminated animal, it is possible to produce an animal [or egg] certified to be free of specific pathogens.”

- IOM Press Release. “Federal Guidelines Needed to Ensure Safety in Animal-to-Human Organ Transplants.” National Academy of Sciences. July 17, 1996.

...what else is in those eggs?

- **Viral contaminants:**

- **Avian leucosis viruses (AVL)**

- From the potent Rous sarcoma family of viruses
- Sarcoma viruses have been shown to cause cancer

- **Endogenous avian retroviruses (EAV)**

- Present in all breeds of chickens and cannot be eliminated from flocks
- Associated with reverse transcriptase
- It is possible that reverse transcriptase is weaving viral genes into human DNA

***Truth is,
each egg is a new
experiment***

New Vaccine:

Good new/Bad news

- ***The CDC's good news:***
 - “We have a vaccine”
- ***The CDC's bad news:***
 - “12 times more antigen is needed than in the annual flu shot to affect an antibody response”

- Manufacturers are scrambling to create a pandemic flu vaccine for “every man, woman and child” in the U.S, a concept first introduced by former head of HHS, Tommy Thompson, when the same manufacturers were scurrying to make the smallpox vaccine.
- Makers have contrived a way to stretch the available vaccine:
 - Though the addition of *vaccine adjuvants.*

- An adjuvant is a substance added to produce a high antibody response using the smallest amount of viral-containing (antigen) solution possible in the shot.
- The first adjuvants were used in 1925 by French researcher G. Ramon, who found that by adding breadcrumbs, agar, tapioca, starch, or oil lecithin to vaccines, he could increase the response to diphtheria and tetanus antitoxins.

After more than 75 years of use, the mechanism of actions for most adjuvants is still “incompletely understood.” In other words, what they do to the body is unknown.

Primary Adjuvant Candidate: MF-59

- MF-59 is an oil-based adjuvant primarily composed of squalene, Tween80 and Span®85
- Squalene is:
 - A precursor for cholesterol and hormones
 - Found in a variety of foods, including eggs and olive oil, over-the-counter medications, and health supplements.
 - Can purchased at health food stores in its more commonly known form, “shark liver oil.”

- **A partial list of risks that have been associated with adjuvants includes:**

- Local or acute inflammation, including the formation of painful abscesses, persistent nodules, ulcers or draining lymph nodes;
- Induction of fever, muscle pain, joint pain and headaches—much like the flu;
- Immune suppression;
- Anaphylaxis (shock), hives and vasculitis;
- Systemic toxicity to tissues and organs;
- Induction of autoimmune arthritis, and other autoimmune disorders;
- Genetic events: carcinogenesis (cancer); teratogenesis (birth defects) and abortogenesis (causing abortions)
 - *Expert Review of Vaccines* in 2003: Kenney, RT, Edleman, R. "Survey of human-use adjuvants." Expert Review of Vaccines. 2 (2003) p. 171

The MF-59 patent application:

- “Any metabolizable oil, particularly from an animal, fish or vegetable source, may be used. It is essential that the oil be metabolized by the host otherwise the oil component may cause abscesses, granulomas or even carcinomas, or (when used in veterinary practice) **may make the meat of vaccinated birds and animals unacceptable** for human consumption due to the deleterious effect the unmetabolized oil may have on the consumer.” (emphasis added)
- "United States Patent 6299884. Adjuvant formulation comprising a submicron oil droplet emulsion" Patent Storm. 9 October 2001. <http://www.patentstorm.us/patents/6299884.html>

Squalene in the Body

- Scientific data, published in peer reviewed journals, show that injected squalene is not metabolized like a food passing through the intestinal tract.
- Injected squalene droplets, in vaccine research, are considered to be “metabolized” when immune cells interact them, transport them through the lymphatic system and form antibodies to them.
- In other words, squalene molecules are not are excreted; they end up in tissues where toxic reactions can occur.

Squalene in the Body

- **All experimental oil adjuvants injected into rats were found toxic.**
- **All rats developed an MS-like disease that left them crippled, dragging their paralyzed hindquarters across their cages.**
- **Squalene caused severe arthritis (3 on scale of 4)**
- **Squalene in humans at 10-20 ppb lead to severe immune responses, such as autoimmune arthritis and lupus.**
 - **Matsumoto, Gary. Vaccine A: The Covert Government Experiment That's Killing Our Soldiers and Why GI's Are Only the First Victims Vaccine. New York: Basic Books. pg 54-5.**

MF-59 in the body

“Intuitively, this premise seems somewhat dubious: Your body could metabolize a cheeseburger, for instance, but you couldn’t liquefy it in a blender and inject the resulting slurry [into your arm], and then expect to feel well in the morning.”

- Matsumoto, Gary. Vaccine A: The Covert Government Experiment That’s Killing Our Soldiers and Why GI’s Are Only the First Victims Vaccine. New York: Basic Books. pg 54.

***Truth is,
each vaccine is a new
experiment***

Moving away from eggs...

The “new” vaccine manufacturing:
Cell Line Technology

Cell Line Technology

- First described in the mid-1990s and still in the experimental stages, all major players in the vaccines industry have been attempting to develop cell culture technology to replace egg-based flu shots.
- The reason for the interest is that using cell lines, flu shot production can be rapidly expanded and scaled up in times when the government thinks there is an emergency need for more flu shots.

Cell Line Candidates

- VERO cells

- Technology from Netherlands called PerfluCel™
- derived from African green monkeys
- Concerns about SV40 contamination
- In 2004, Baxter withdrew it due to high rate of fever and “other associated symptoms.”

Cell Line Candidates

- PER.C6 Cells

- Originating from retinas of aborted fetal tissue
- Converted to “perpetually dividing cells” by injecting Adenovirus 5 into the cells
- [retina cells + Adenovirus 5] = “designer substrate”
- Designer substrates injected into test animals form tumors

Cell Line Candidates

- FluBlok™
 - Made from insect cells (caterpillars)
 - (H) antigen from influenza virus is inserted into a second virus called a baculovirus. This combination is inserted into insect cells
- MDCK™
 - Made from dog kidney cells (cocker spaniel)
 - Approved in the Netherlands; Chiron is seeking approval in the U.S.

“In addition to the possibility of contamination of cell substrates...the use of immortalized, neoplastic human cells to develop [vaccines] raises theoretical concerns with regard to possible contamination with **TSE/BSE** agents.”

- FDA. “Designer” Cells as Substrates for the Manufacture of Viral Vaccines.”
http://www.fda.gov/ohrms/dockets/ac/01/briefing/3750b1_01.htm

TSE is Transmissible Spongiform

Encephalopathy causes tiny holes in the brain tissues, giving a "spongy" appearance under the microscope.

When this condition occurs in cows, it is called Bovine Spongiform Encephalopathy, **commonly known as "mad cow disease."**

***Truth is,
each vaccine is a new
experiment***

Even more disturbing...

**Injecting that solution is highly
unlikely to prevent the flu**

Flu shots don't work: Peds Cochrane Collaboration Vaccine Project

Review of 51 studies involving more than 260,000 children, including 17 papers translated from Russian

“No evidence that injecting children 6-23 months with flu shots is any more effective than placebo.”

- "Vaccines for preventing influenza in healthy children." The Cochrane Database of Systematic Reviews, 1 (2006).

No safety studies in children

"We were astonished to find only one safety study of inactivated vaccine in children under two years; that was carried out nearly 30 years ago and only in 35 children."

- Kennedy Laura. "Flu Shots for Toddlers Not Backed By Evidence, Major Study Says." Health Behavior News Service. 24 Jan. 2006.

Flu shots don't work: Adults

Cochrane Collaboration Vaccine Project

Review of 25 reports involving 60,000 adults.

“Vaccination of healthy adults only reduced risk of influenza by 6% and reduced the number of missed work days by less than one day (0.16) days.”

“Vaccines for preventing influenza in healthy adults” The Cochrane Database of Systematic Reviews. 1 (2006)

Conclusion:

“Universal immunization of healthy adults was not supported by the results of this review.”

“Vaccines for preventing influenza in healthy adults”
The Cochrane Database of Systematic Reviews. 1 (2006)

Flu shots don't work: Elderly **Cochrane Collaboration Vaccine Project**

Review of 64 studies over 96 flu seasons

“The runaway 100 percent effectiveness that's touted by proponents [of the flu shot] was nowhere to be seen...What you see is that marketing rules the response to influenza, and scientific evidence comes fourth or fifth.”

Rosenthal Elisabeth. “Two Studies Question the Effectiveness of Flu Vaccines.” The New York Times. 21 Sept. 2005.

Conclusion:

**Flu shots are ineffective and possibly even harmful in the most highly targeted group:
*The elderly.***

--Cochrane Reference

If it doesn't work for kids, healthy adults or the elderly...

Who is left?

Why do we need it?

**THE STATISTICS WON'T BE ANY BETTER FOR
THE BIRD FLU VACCINE**

Mandatory Vaccination

Is it a possibility?

Mandatory Vaccination

- **Laying the groundwork:**
 - **January 28, 2003: Introduction of Project BioShield during Bush’s State of the Union Address**
 - Created a permanent “indefinite funding authority to develop “medical countermeasures”
 - New authority to the NIH to speed R&D of drugs and vaccines
 - Emergency approval of “fast tracked” drugs and vaccines if needed

Mandatory Vaccination

- 1946: Establishment of the USPHS and EO 9708, the list of communicable diseases that could be corralled using quarantines
 - Since 1983: Cholera, diphtheria, TB, typhoid, smallpox, yellow fever, viral Hemorrhagic fevers
- April 4, 2003: SARS added through EO 13295
- April 1, 2005: Amendment to EO 13295
 - “Influenza caused by novel or re-emergent influenza viruses that are causing, or have the potential to cause, a pandemic
 - The power to quarantine was delegated by the President to the Sec of HHS to be determined at his discretion
 - Sec of HHS can arrange for the “apprehension and examination of persons reasonably thought to be infected.”
 - A cough or a fever could put a person at risk for being quarantined for an extended period of time and without recourse

Mandatory Vaccination

- Division E, Section (b)(1) states:
 - The Secretary can make a determination that a “disease, health condition or threat” constitutes a public health emergency
 - And then the Secretary may recommend “the manufacture, testing, development, administration, or use of one or more covered counter measures.”
 - A covered countermeasure, defined in Division E is a “pandemic product, vaccine or drug.



***But that wasn't good
enough for Pharma...***



Mandatory Vaccination

- Enter the “Frist Addendum”
 - Called “Division E: Public Readiness and Emergency Preparedness Act”
 - Added 40-pages to the 423-page HR 2863, the 2006 DoD Appropriations Bill
 - Added at 11:20p on a Saturday night (Dec. 17) long after House Committee members had signed off on the bill and gone home for the holidays.

Complete Drug Company Immunity

- Division E provided:
 - Liability for *all* drugs, vaccines or biological products deemed a “covered countermeasure” for an outbreak of any kind
 - Protection for *any* product for *any* public health emergency declared by Sec of HHS
 - Protection from all accountability, no matter what
 - Protection from lawsuits, even if the drug company knowingly harms someone

Decreases from the WHO

1. Implement interventions identified during contingency planning and new guidance provided by WHO.
2. Consider/reconsider use of anti-virals for early treatment of cases.
3. Assess/reassess efficacy and feasibility of prophylaxis for the purpose of attempting to contain outbreaks.
 - *This implies vaccine prophylaxis. Ring vaccination was part of the smallpox containment plan.*
4. *Determine target population; if intervention agreed, implement as an emergency measure; assess impact.*

Decrees From the WHO

5. Consider deploying prototype pandemic vaccine, if available.
 - This means that experimentation with an unproven, marginally tested vaccine will be allowed.
6. *If agreements are already in place with manufacturer(s), consider recommending cessation of seasonal vaccine production and initiation of full-scale pandemic vaccine production.*
7. Adjust priority lists of persons to be vaccinated.
8. Plan for vaccine distribution and accelerate preparations for mass vaccination campaigns (e.g. education, legal/liability issues) **for when pandemic vaccine becomes available.**

From the WHO document: Pandemic alert period, phase 5 – Prevention and containment: “WHO global influenza preparedness plan,” World Health Organization, Nov. 2005.

<http://www.who.int>

The Scam of Tamiflu



Neuraminidase Inhibitors:

How they work

- Surface proteins, (H) and (N)
- When replicating virus exits a cell, the (H) antigen becomes coated with sialic acid. With this covering inhibits the invasion of the next cell
- The enzyme, neuraminidase, “scrubs” sialic acid off the (H) antigen; passage of the virus can occur
- Neuraminidase inhibitors block the action of the (N) enzyme, theoretically inhibiting the spread of the virus to adjacent cells and to the next host.

Relenza™: The first flu drug

- Relenza™ (Zanamivir)

- Even tho the FDA committee voted 14 to 3 *against* approval, it became the first neuraminidase inhibitor for adults and adolescents in 1999
- Intranasal spray take twice daily for 5 days. Must begin with in two days of symptoms.
- Only works for Influenza A viruses; ineffective for ILI-causing organisms.
- “Robust activity” reported by the FDA
 - Meaning: the drug could shorten symptoms by about one day when compared to placebo (doing nothing at all.)

Tamiflu™: Next flu drug on the market

- Tamiflu™ (oseltamivir) was approved 3 months later, in 1999
- More “robust activity”
 - Only effective on culture-confirmed influenza A
 - Must be given within two days of symptoms
 - Symptoms relieved 1.3 days sooner than with placebo

- Even though Tamiflu is designed to inhibit the neuraminidase (N) enzyme of influenza viruses, it has been found to be more effective against some influenza subtypes than others.

- It is generally accepted among scientists that the pandemic strain will contain surface antigen N1
- In laboratory tests designed to evaluate Tamiflu's ability to inhibit the N1 neuraminidase, Tamiflu failed dismally.
- In order for it to work, *eight to twelve times* the recommended dose of the drug was needed to achieve the same level of inhibition in other subtypes.

- **When Tamiflu was tested specifically against H5N1 isolates from Vietnam and Thailand, an *additional* three-fold increase in the dose was required to stop its activities, meaning almost *30 times more Tamiflu* would be needed to inhibit the infectivity of H5N1 than other forms of influenza viruses.**
- **But an apparent lack of efficacy has never deterred the pharmaceutical companies from promoting a drug or vaccine.**

Concerns about neuraminidase inhibitors

- **Relenza**

- A mere six months after approval the FDA was forced to issue a Public Health Advisory highlighting problems with Relenza.
- Caution was advised concerning its use in patients with underlying asthma or chronic obstructive pulmonary disease (COPD) such as emphysema.
- During the first season, 16 reports of serious reactions, including one death

Concerns about neuraminidase inhibitors

- **Tamiflu:** The query dates, from March 22, 2004, through April 22, 2005:
 - 1,184 case reports for adverse reactions were posted on AERS from sources both domestic and abroad.
 - Nearly 16% occurred in children (n = 190).
 - Among the 75 pediatric case reports of serious side effects, there were:
 - 8 fatalities (four sudden deaths, three cardio-respiratory arrests)
 - 1 case of acute pancreatitis with cardiopulmonary arrest
 - 32 neuropsychiatric events; and
 - 12 skin/hypersensitivity events.
 - Department of Health and Human Services, Public Health Service, Food and Drug Administration, Center for Drug Evaluation and Research Memorandum, Food and Drug Administration, 25 August 2005.

Tamiflu resistance is real...

**Tamiflu causes
“mutants”**

Tamiflu resistance

- Resistance has been more widely observed in children than in adults.
- Researchers noted that everyone, including Roche, expect some resistance to Tamiflu once it is in wide use.
- Certain genes within the viruses seem to be associated with much more resistance than others.
 - Sensitivity testing revealed that treated viruses could be 300-fold to 1,000,000-fold more resistant than the pre-treated viruses

Tamiflu could cause the next “pandemic”

- A major concern is that Tamiflu can lead to the emergence of “mutant” viruses that are resistant to the drug and are “antigenically distinct” from original virus treated with Tamiflu.
 - Meaning the “drift” could become a “shift”
 - A flurry of activity occurred to suppress or deny the findings
- Roche resolutely denied the FDA’s assertion, and pushed to smooth over the FDA’s concerns that mutant viruses are “less pathogenic (less disease-causing) than wild type influenza viruses.”
- The FDA wasn’t convinced:
 - “It appears that mutant viruses may be shed at high titers [i.e., in large amounts] by some subjects before being cleared. Therefore, *this reviewer has not been reassured that these viruses are harmless to the general population.*”
 - BPCA Executive Summary. NDA 21-087/NDA 21-246. Tamiflu capsules and for oral suspension,” Food and Drug Administration, Center for Drug Evaluation and Research, 28 June 2004.

How The Hype All Began

- **May 1997: A Hong Kong pre-school had set up a small petting zoo on its grounds, making a home for five chickens and eight ducks.**
- **Several days after the mini school aviary began, a three-year-old boy in the class began to cough. The illness and fever progressed rapidly and the boy's parents rushed him to Victoria Hospital where he was admitted with pneumonia and respiratory distress.**
- **Six days later the child died suddenly from complications that included Reye's syndrome, adult respiratory distress syndrome, and multiple organ system failure**

How The Hype All Began

- A second case of H5N1 infection was confirmed in Hong Kong on November 26, 1997, and more cases appeared throughout December.
- The news of the direct bird-to-human transmission sent a chill throughout the medical and scientific community: Reported to be the first documented isolation of H5N1 in humans this was all public health officials around the globe needed to hear.
- Even though there was no evidence of human-to-human transmission and no further human infections occurred. They believed the next pandemic had arrived.

The Killing Fields

- Killing the flocks remains the first course of action recommended by the FAO, the (OIE), and the WHO to bring influenza outbreaks under control.
 - Most common method: Stuffing live birds into plastic bags where they suffocate as they are buried alive in mass graves.
 - “I pray for the chickens every night. But when I wake up the next morning, I have to do the same job again. It’s no different from being an executioner,” one of state workers told a reporter.

The Killing Fields

- The close living conditions of farmers with their poultry are being blamed for development of the highly pathogenic viruses.
- The theory is that side-by-side domestication between people and poultry increased the contact time between humans and fowl, increasing the odds that an aggressive form of the virus will emerge, “jump species,” and start the next worldwide pandemic.
- However, something just doesn’t add up.
 - There have been 90-odd deaths and trillions² number of human-chicken interactions..
 - The vast majority of the chickens and ducks that have been killed have been healthy—showing no signs of illness—when they were brutally murdered

**Is agribusiness out to
eliminate the independent farm?**





Agribusiness Takes Over

- In 1987: There were 2,500 independent egg producing companies in the U.S.
- By Feb. 2004: There were 260
- Currently almost 95 percent of all farms in the U.S. are controlled by agribusiness.
 - “U.S. Egg Industry.” United Egg Producers. U.S. Dept. of Agriculture, American Egg Board, USAPEEC.
http://www.unitedegg.org/useggindustry_generalstats.aspx
- In the U.S., the mega-purveyors of poultry are Cargill, Purdue Farms, ConAgra Poultry, GoldKist Inc., and Tyson Foods

Poultry processing: Bad news for birds and humans

- No federal laws to regulate the raising, transporting, and slaughtering of poultry in the U.S.
- Poultry processing is one of the two of the most dangerous industries in the U.S., according to a U.S. Government Accountability Office (GAO) report from January 7, 2005
 - Poultry carcasses pass along production lines at the rate of 91 chickens per minute, the maximum allowable speed.
 - Common injuries include cuts, cumulative trauma, falls, fractures and amputations
 - GAO January 2005. <http://www.gao.gov/new.items/d0596.pdf>

- 
- **more than 72,000 family farms disappeared between 1993 and 1999, a decline of 8%**
 - **But the real value of U.S. agricultural exports declined 22% between 1996 and 2000,**
 - **During the same period, total agricultural imports rose by 6%.**
- 

Agribusiness Takes Over

- **Vertically integrated Farming**

- 1957: The “brain child” of two Harvard Business School economists—Ray Goldberg and John Davis—who envisioned a streamlined system to get food from the farm to the grocers’ shelves.
- **Agribusiness:**
 - “The sum total of all operations involved in the manufacture and distribution of farm supplies, production operations on the farm, and the storage, processing, and distribution of farm commodities and the items made from them.”
- **The goal:** Create an assembly line for food production
- **The objective:** maximize profits for the agribusiness conglomerates that would come to own or control every aspect of the farm and manufactured food.

Top 10 U.S. Poultry Producers

(as of February 24, 2005.)

- Tyson Foods
- Pilgrim's Pride
- Gold Kist
- Perdue Farms
- Sanderson Farms
- Wayne Farms
- Mountaine Farms
- Foster Farms
- OK Foods, Inc
- Peco Foods

The “Tyson” Arrangement

- Baby chicks and everything necessary to raise them is supplied including feed, vaccines, and medications.
- In the industrialized chicken arrangement (referred to as “factory farming”) the farmer assumes all the risks of day-to-day operations and if the birds get sick or die he is responsible for the costs.
- This arrangement has benefited Tyson to such a great extent it is looking for people and birds to exploit in other parts of the world.

“Tyson” in Thailand

- In the span of just a few years, the Thai poultry industry has grown backyard chicken producers to fourth-largest poultry exporter in the world by 2003.
- Founded in 1921, the poultry powerhouse in Southeast Asia is the Bangkok-based Charoen Pokphand (CP).
 - Employing more than 100,000 people in 20 countries, CP’s core business is food production, but its activities range from seeds and telecoms to the franchise of 7/Eleven retail stores.

The “Tyson” in China

- **New Hope Group**

- New Hope Ltd., founded in 1982 by the four Liu brothers for a meager investment of US\$120.
- Today, New Hope Group boasts sales well over US\$1billion annually
 - Two of the brothers, Liu Yongxing and Liu Yonghao, were ranked #1 and #2 on “China’s 100 Richest Business People” in 2001; they were #5 and #6 in 2005.
 - “China’s 100 Richest Business People,” *Forbes*. 12 November 2001.
 - “China’s 40 Richest,” *Forbes*, 3 November 2005.

The “Tyson” of China

- The Minister of Agriculture in China, Du Qinglin, is an advocate of vertically integrated farming
 - “Bird flu has adversely affected the poultry-raising sector, but in the long haul, it will also prompt a transformation of the [backward] rearing methods, forcing the industry to develop along a healthy and sustainable track.”
 - “Virus outbreaks may change poultry raising.” *China Daily*. Agence France-Presse. 1 December 2005.

The “Tyson” in India

- **Founded in 1971, the VH Group (Venkateshwara Hatcheries) is today a \$6 billion conglomerate.**
 - **One of the largest fully integrated poultry organization in Asia, the VH group is the 5th largest egg producing operation in the world.**
 - **The group's greatest success has been the use of genetically modified chicken stock from Babcock and Cobb-Vantress.**

Agribusiness Takes Over

- When H5N1 appeared in Thailand in 2004, every possible step was taken to cover it up.
 - The Prime Minister engaged in a personal crusade to encourage people to eat their favorite chicken dishes, convincing Thai citizens that eating chicken was a “patriotic duty.”
- At the same time, Thai troops and about 60 prisoners from local jails were dispatched to 41 of the country’s 76 rural provinces to kill and bury poultry belonging to local farmers.
 - Authorities estimate more than 40,000 small and medium sized open-air poultry farms are scattered throughout Thailand and most have been raided by chicken marauders

The Thai prime minister promised
to “turn the crisis into opportunity.”

*...But helping the local farmer reestablish his
business wasn't exactly the opportunity that
the Thai government seem to have in mind.*

Agribusiness Takes Over

- The Thai government launched a plan to “modernize national poultry farming.”
 - Mandatory upgrades included building industrial-grade poultry houses, an incinerator for dead birds, and special coops for sick ones.
 - When farmers could not afford the new rules, three state banks stepped forward offering loans for the farm upgrades.
 - Because of the high investments required to build industrial farms (up to US\$252,750) most small, independent raisers were wiped out.
 - Reportedly, more than 1,000 farmers throughout Thailand gave up their farm business due to the financial hardship imposed by the new regulations.

Similar Stories from around the World

Thailand: An organic farmer explained how farmers become dependent on CP:

“The company comes and makes wonderful promises to the farmers. In my village, they convinced many of us to start raising chicken for them. Then the exploitation comes. Farmers have to invest a lot of money at the beginning. There is a guaranteed price, but CP always finds a way to pay less, arguing that the farmers didn’t respect the standards, that the quality is not good, that the production is late. Contract farmers become very indebted; they sometimes have a 300,000 baht debt (US\$7,500). Personally, I will never enter into a contract with CP. They destroy small farmers with false promises,” he said.

Delforge, “The flu that made agribusiness stronger.” ,
Focus on the Global South, 5 July 2004

Agribusiness Takes Over

- **Hanoi**: Farmers were compensated 15,000 dong (US\$0.95) for each destroyed duck, which cost 40,000 dong (US\$2.53) to raise.
 - “It is our entire fortune plus bank loans,” said 43-year-old Nguyen Van Tan, who owned 3,500 ducks and has raised poultry since 1990. “We want the compensation early to change jobs, to restore my life, and for my children’s meals and study.” Minh Ho Binh. “Vietnam cities hasten mass poultry slaughter,” Reuters, 15 November 2005.

Agribusiness Takes Over

- Heishan County, China: A village farmer, Jiang Lianfu, owned 13,000 healthy, asymptomatic hens that were slaughtered as part of a mass culling of six million birds.
 - As he watched helplessly, armed guards brutally killed his flocks. Jiang told the reporter, “I fed those birds for more than half a year. I treated them like my own children. We just stood there and watched as the birds’ necks were wrung.”
 - Jiang had spent about US\$24,700 to establish his henhouse, half with borrowed funds. The government paid him approx. US\$15,600, not only leaving him in debt but without a source of revenue.

Agribusiness Takes Over

- From India:

- "We are looking at a very difficult future. All of us will have to start again from scratch, and I don't know how many of us will survive," said Ghulam Vhora, a member of an Indian poultry farmers' association.

- "Mass slaughter of fowl in India after bird flu outbreak reported. *International Herald Tribune*, 19 February 2006.

If local governments fully understood the US poultry industry....

...they might be less willing to sacrifice the local industry and animals to the agribusiness giants.

Recent Outbreaks of Bird Flu in North America:

- **1983–5: H5N2 outbreak in Pennsylvania; 17 million birds destroyed.**
- **Feb. 2004: H5N2 outbreak in Texas. At least 7,000 chickens were destroyed.**
- **Feb. 2004: H7N3 outbreak that occurred in Fraser Valley, British Columbia. More than 19 million birds culled.**
- **Mar. 2004: H7N2 outbreak in Pocomoke City, Maryland. More than 500,000 chickens destroyed**

Why culling?

- It is presumed that when a highly pathogenic influenza virus is found in a flock, the virus will be transmitted indefinitely through the stool of the birds.
- Complete destruction of all the birds is considered to be the only option for eradicating the outbreak, even if the birds show no sign of the infection.
- Chickens are considered disposable commodities that can be readily replaced.
 - It only takes 45 days to raise a chick to slaughter weight; sacrificing the birds is only a short-term loss of profits

Sick Chicks in the U.S.

Becoming ill may have little to do with the “virulence” or “pathogenicity” of the virus and almost everything to do with the state of health of the birds compromised by the established practices of the poultry industry.

Intensive Chicken Farming

- A typical US “grower” houses up to 20,000 chickens.
- The high density prevents chickens from practicing many of their normal behaviors.
- Unknown to most, chickens have a carefully regulated social life and a cohesive social structure
- Each chicken has only 130 square inches of living space;
 - a chicken needs at least 138 square inches of space just to stretch its wings.
 - extreme crowding stresses the birds and increases the possibility of illness.

Intensive Chicken Farming: Health problems—Environment

- **Ammonia:**

- Uncomfortable to humans at 15 ppm
- Levels are allowed up to 20ppm but up to 200ppm have been measured
 - Immunosuppression
 - Bronchial tube congestion, lung hemorrhages and death
 - Blindness
- High ammonia levels and closed vents were blamed as the cause of death for thousands of chickens on a farm owned by Tyson Foods in Waldron, Arkansas in 2004.
 - Bagel, Ann. “Excess ammonia levels killed Tyson chickens,” Meetingplace.com, 5 April 2004.

Intensive Chicken Farming: Health problems—Vaccines

- Newcastle disease
- Fowl pox
- Fowl cholera
- Marek's disease
 - Intranasal vaccine given the first day of life for a herpes virus
 - Unpublished experiments indicate that the incidence of vitiligo was significantly higher and more severe in chicks that received the Marek vaccine than those who were not vaccinated
 - The vaccine thought to induce an autoimmune response causing brown Smyth-line chickens to turn white
 - Smyth, J. R. et al. "Do viruses and/or growing environment affect the expression of vitiligo in Smyth line chickens?" *Pigment Cell Research*, 10 (1997): 108.

- 
- **More than 200 million domestic chickens, ducks, geese, and turkeys in at least nine countries have been destroyed since December 2003 when H5N1 first appeared.**
 - **Culling flocks may limit the immediate presence of the virus but it won't stop a new virus from reappearing unless the living conditions and the overall health of the birds are improved.**
 - **By placing new chicks in a sick environment, the cycle is bound to occur all again.**

It bears repeating:

The dreadful living conditions for the industrially-raised chickens coupled with environmental toxicities have suppressed the immune systems of the all birds involved, leading to their increased susceptibility of H5N1 catastrophe.



Intensive Chicken Farming: Health problems—Genetic Mod.

- 1865: monk Gregor Mendel first used discovered selective breeding through experiments with pea plants.
- Genetic modification applied to poultry:
 - In the 1950s, it took 84 days to raise a five-pound chicken.
 - Today, a chicken reaches market weight in 45 days.
 - “If [a human] grew as fast as a [genetically modified] chicken, you’d weigh 349 pounds at age two.”
 - As for turkeys, “If a seven pound human baby grew at the same rate that today’s turkeys grow, at 18 weeks of age, [the baby] would weigh 1,500 pounds.”

Intensive Chicken Farming: Health problems—Genetic Mod.

- **Rapid growth rate is designed to maximize profitability**
 - Fewer days of life/less feed
- **Abnormal egg laying**
 - Up 250 a year in contrast to the one or two clutches of about a dozen eggs per clutch laid by her organically-raised relatives.
- **Health problems:**
 - Congestive heart failure
 - Premature death
 - Inability to walk
 - Painful spontaneous hip dislocation

Intensive Chicken Farming: Plans for Genetic Modification

- High-level research going on to develop a genetically modified (“transgenic”) chicken created to be H5N1-resistant.
- The idea is that a genetically modified, flu-resistant bird would eliminate the “reservoir” for influenza viruses
- Researcher Laurence Tiley stated,
 - “Once we have regulatory approval, we *believe it will only take between four and five years to breed enough chickens to replace the entire world population.*”
 - Henderson, Mark. “Scientists aim to beat flu with genetically modified chickens,” *The London Times*, October 29, 2005.

Intensive Chicken Farming: Problems with Genetic Modification

- **Advocates of genetic manipulation promote it as a precise technique**
 - **Deceptively suggesting that a single gene can be inserted into a specific site**
 - **Suggesting modification will change only one specific characteristic of the food.**
 - **This is not the case.**

Intensive Chicken Farming: Problems with Genetic Modification

- The technology for genetic engineering is crude and imprecise; the genes being inserted can land anywhere on the host's gene.
 - It is rather like firing a gun loaded with buckshot and hoping one pellet will hit the bull's eye.
- Scientists admit they do not fully understand what happens when genes from one organism are inserted into the DNA of another.
- Newly inserted “rogue genes” have a tendency to be unstable and drift because they are not firmly “anchored” into the genetic make up of the host.

The Agent Orange Connection

- From 1964 to 1973, the U.S. bombed Vietnam with *6.1 billion tons* of explosives were detonated throughout Southeast Asia—that's 12,200,000,000,000 pounds of bombs.
- Agent Orange and other defoliants were mixed with kerosene and diesel fuel before being dispersed by aircraft, by vehicle, and by hand.
- According to researcher Arthur H. Westing, the sprayings were “frequent and voluminous.”
 - As many as 10,000 missions were flown, resulting in dioxin being deposited on more than 15 percent of South Vietnam and a sizable portion of Cambodia and Laos
 - If deposited into the local water supplies—ponds, lakes, rivers, or streams—it remains in the sediment indefinitely.

The Agent Orange Connection

- Even though Agent Orange use was discontinued in 1971 and one of its components, 2,4,5-T has been banned in the U.S. and many other countries, Agent Orange continues to cause health problems in humans and in wildlife due to its lack of biodegradability.
- A highly persistent chemical, dioxin can take more than 15 years to degrade to half its original concentration. In subsurface soil it has a great affinity to organic matter and remains largely unchanged, virtually forever.
- More than 30 years later, dioxin continues to be persistent in the food chain, causing potentially deadly contamination of wildlife.

The Agent Orange in the Soil

- Research has confirmed that even trace amounts of dioxin—levels of only 2-3ppt—are extremely toxic in laboratory animals.
- Canadian researchers have found dioxin levels in soil collected throughout different regions of southern Vietnam to be as high as 898 ppt.
- But the most extreme levels of dioxin contamination were found in the area of Bien Hung Lake, where dioxin levels were measured to be ***greater than 1.1 million ppt***

Dioxin in Food

- “Safe” levels of dioxin in animal muscle (meat) should be **< 0.1 ppt**
- The “allowable limit” in eggs is **0.75 ppt**
- The “allowable limit” for levels of dioxins in poultry meat is **2 ppt.**
 - This is the equivalent of a single drop of liquid placed in the center car of a ten-kilometer long cargo train.
 - “How Toxic is Your Diet?” *Inter Press Services*, 20 November 1997. (<http://www.ejnet.org/dioxin/diet.html>)

Dioxin in Vietnamese food

- Chemicals found in free-ranging chickens ranged from **15 ppt** in the meat and **up to 74 ppt** in the fat.
- Dioxin concentrations in the fat of domestic ducks have been found to be **276 to 331 ppt**
- When the TEQ score was tabulated for the duck fat—a sum of all toxic chemicals measured—the score ranged from **536 ppt to 550 ppt**
- With such high levels of chemicals found in chickens and ducks, it should be no surprise that equally high levels of dioxins and other POPs have been discovered **in their eggs**

2005 International POPs Elimination Network (IPEN) egg study

- Belarus
- Bulgaria
- Czech Republic
- Egypt
- India
- Kenya
- Mexico
- Mozambique
- Pakistan
- Philippines
- Russia
- Senegal
- Slovakia
- Tanzania
- Turkey
- Uruguay
- the U.S

Results of 2005 IPEN Study

- The diet of backyard and free-range hens make eggs useful indicator of overall environmental contamination
- 70% of the samples exceeded the 2002 European Union (EU) limit for dioxins in eggs is 0.75 ppt
 - Russia: **44.69 ppt** ...eggs of chickens raised near a toxic waste dump
 - Philippines eggs: **9.68 ppt**
 - Lucknow, northern India: **19.80 ppt**
 - Eloor, southern India: **13.91 ppt**
 - DiGangi, Joseph and Petrlik, Jindrich. “The Egg Report,” *Oztoxics*, April 2005. www.oztoxics.org

Take home message of the IPEN Egg Study

- The chemicals can be absorbed and transported by migratory species across international boundaries and deposited far from their place of origination. When released, they can accumulate in a new ecosystem, making it difficult to identify the origin of the compound.
 - For example, if migratory bird feeds and breeds in a particular area and its eggs were laid in the vicinity of the breeding grounds, the chemical content in its eggs would reflect local sources.
 - However, if the bird breeds in one area and then migrates to a far distant place to lay its eggs, those eggs would not reflect the levels of local contamination. Again, the original source of the chemical would be unknown.
 - “Workshop Report on the Application of 2,3,7,8-TCDD Toxicity Equivalence Factors to Fish and Wildlife,” U.S. Environmental Protection Agency, Risk Assessment Forum, August 2001.
- Therefore, although egg studies are useful as a measure of local contamination, chemicals found in the eggs of migratory birds can serve as a **foreboding measure of worldwide industrial filth.**

Agent Orange and Influenza

- Unfortunately, little is known about the impact of chemicals on wildlife as few measurements have been taken, making it difficult to assess the ramifications in migratory birds.
- What *is* known, however, is that a definite link exists between dioxin exposure and the effect of influenza viruses on the immune system as measured in mice

Agent Orange in Humans

More than 30 years later, the
chemicals are still affecting
humans

Dioxin in Vietnam Residents

- Because of the pervasiveness of dioxin in the environment, everyone has some level in their body.
- “Background levels” of 2–3 ppt are stated as “acceptable” and thought to be “non-toxic.”

Dioxin in Vietnam Residents

- 1991-92: Study examined pooled blood specimens collected from patients throughout southern Vietnam.
- Results showed elevated TCDD levels, **up to 33 ppt**
 - Schecter, A. J., et al. “Pesticide application and increased dioxin body burden in male and female agricultural workers in China,” *Journal of Occupational and Environmental Medicine* 38 (1996): 906–911.
- 1995: 43 people tested from Bien Hoa City in southern Vietnam, had TCDD levels as high as **413 ppt** in their blood

Food consumption by Vietnamese

- **2002: Levels of dioxin and POPs in animals raised for consumption in the Bien Hoa City region.**
 - A total of 16 different food samples were collected from local markets
 - Samples included free-ranging and cooped chickens, free-ranging ducks, pork, beef, fish, and a toad.
 - Because duck fat is a delicacy in Vietnam, fat that remained attached to the flesh of samples was also tested.

Food consumption by Vietnamese

- **Results:**

- Channa striata (snakehead fish) = **65 ppt.**
- Free-ranging chickens ranged from **15 ppt** in the meat and up to **74 ppt in the fat**
- Duck fat ranged between **276 ppt** and **331 ppt** wet weight. When the sum of all toxic chemicals measured—the score ranged from **536 ppt** to **550 ppt.**
 - Schecter A., et al.” Food as a source of dioxin exposure in the residents of Bien Hoa City, Vietnam,” *Journal of Occupational and Environmental Medicine*” 45 (2003): 781–788. PMID: 12915779.

To put these levels in perspective...

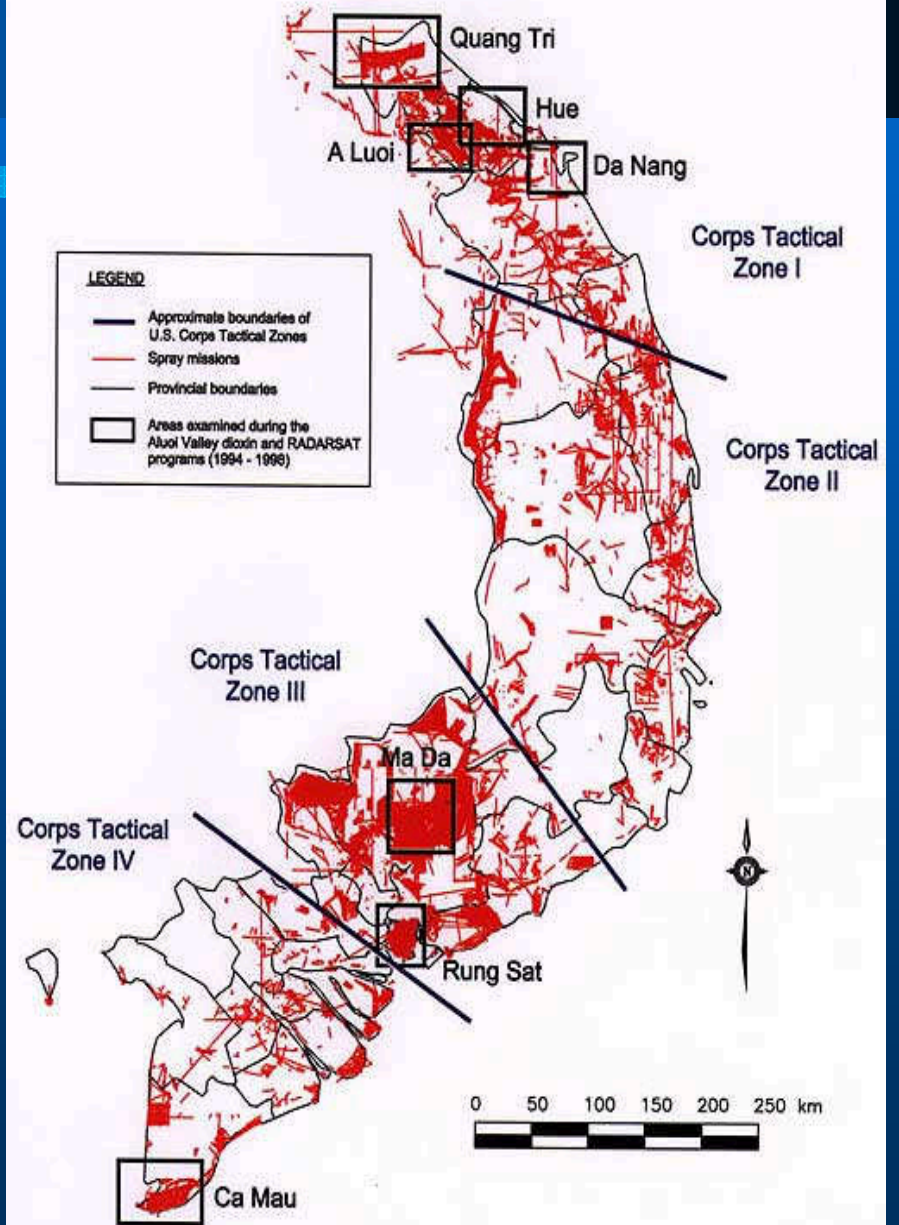
the usual dioxin level found in food is less than 0.1 ppt

Effects of dioxin on the immune system

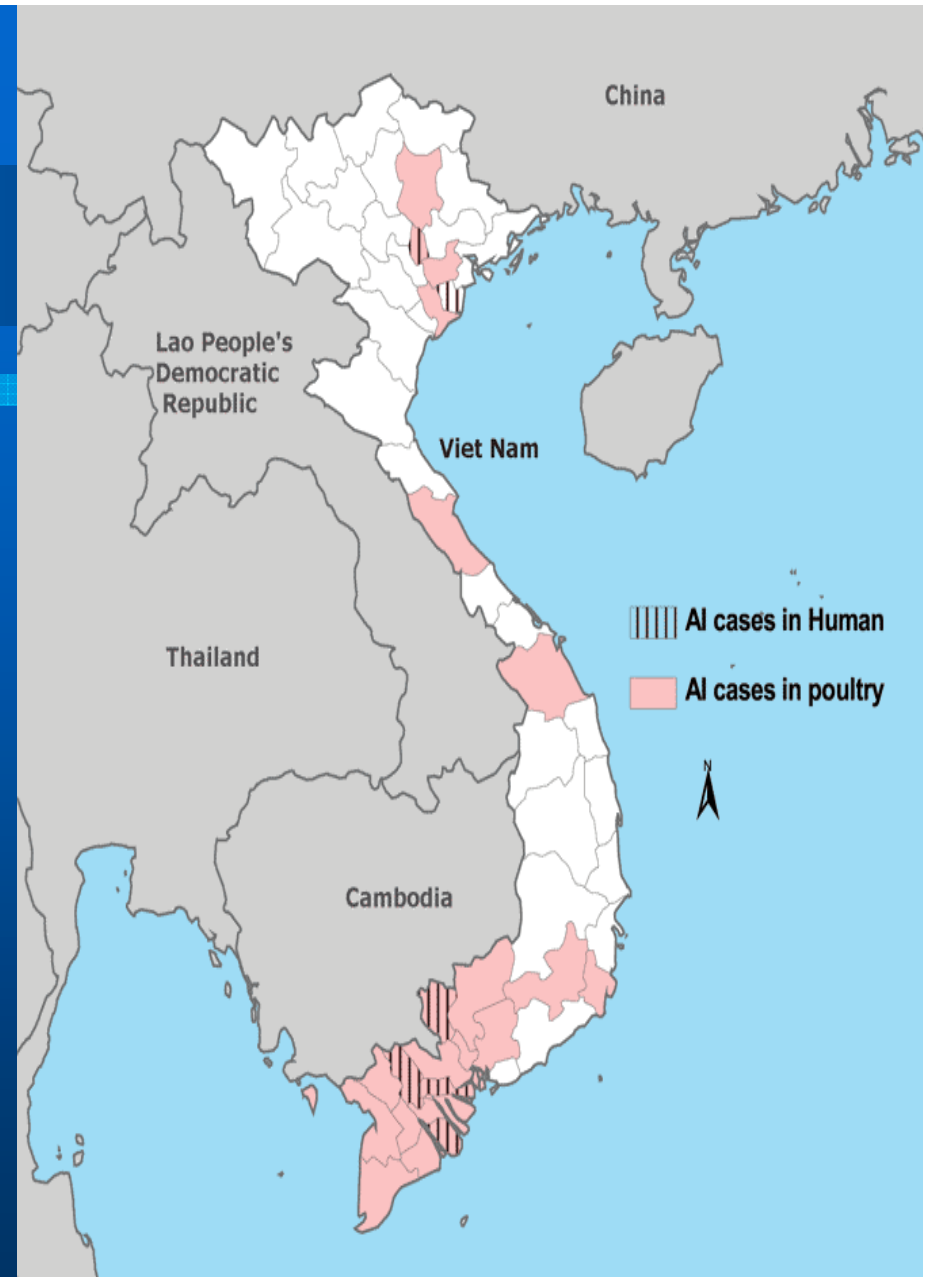
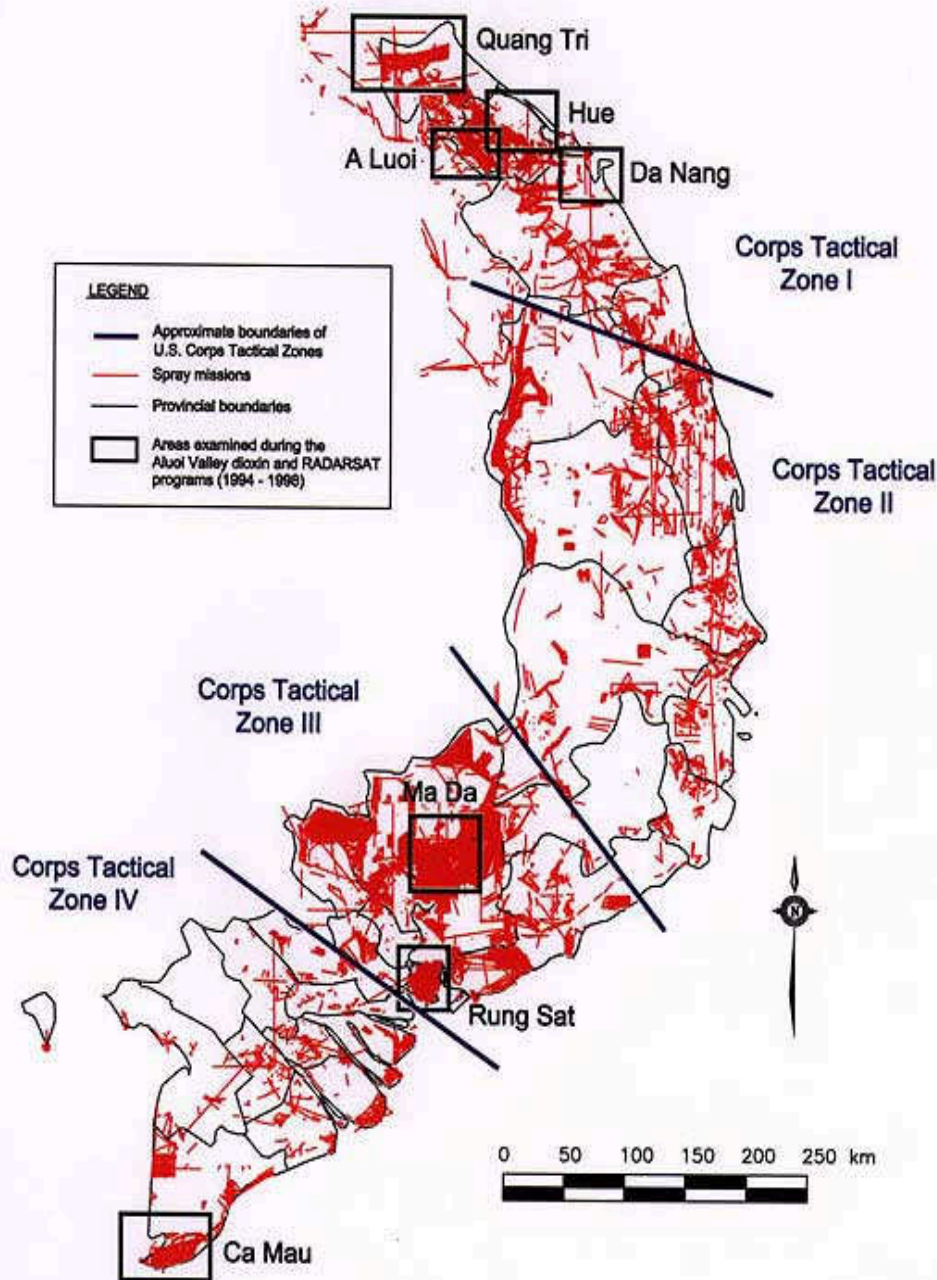
- Studies conducted over the past 25 years have clearly established that the immune system can be compromised by infinitesimally small amounts of dioxin.
- The adverse effect most consistently reported in toxicology literature is its ability to suppress the function of white blood cells (T-lymphocytes)
- Studies confirm that the presence of dioxin compromises the immune system to such an extent that a person—or bird— **is much more likely to have a deadly result when confronted with an influenza A virus if they have also been exposed to dioxin.**



Aerial herbicide spray missions in southern Viet Nam, 1965 to 1971
(Source: U.S. Dept. of the Army).



Aerial herbicide spray missions in southern Viet Nam, 1965 to 1971
(Source: U.S. Dept. of the Army).



Provinces reporting avian influenza outbreaks in poultry and humans in Viet Nam since December 2004 (as of 27 January 2005)

Health Problems and Agent Orange

- The government admits that Agent Orange has been associated with blood cancers—non-Hodgkin's lymphoma, Hodgkin's disease and chronic lymphocytic leukemia (CLL)—and soft tissue sarcomas.
 - Olden, Kenneth PhD “TCDD—Dioxin—is Listed as ‘Known Human Carcinogen’ in Federal Government's Ninth Report On Carcinogens.” National Institute of Environmental Health Sciences, 19 January 2001.
- Veteran's Administration also attributes Agent Orange prostate cancer, respiratory cancers, multiple myeloma, type II diabetes, peripheral neuropathy, and spinal bifida in children of exposed veterans.
 - “Vietnam Veterans and Agent Orange Exposure.” United States Department of Veterans Affairs Employee Education System, March 2002.

Effects of dioxin on the immune system

- **Dioxin suppresses the activity of cytotoxic lymphocytes (CTLs)**
 - Two primary types of “killer” (CTL) white blood cells are natural killer cells (NK) and CD8+ cells. Both inhibit the virus’ ability to replicate
 - In the presence of a virus, the number of NK cells and CD8+ cells rapidly increases.
 - Once activated, these cells release cytokines, responsible for causing fever, pain and inflammation, the symptoms of “the flu.”
 - Without fully functioning CTLs, the host’s defenses can become overwhelmed by the replicating germs, even leading to death.

Dioxin and Influenza

- Research has clearly demonstrated that NK and CD8+ cells are exquisitely sensitive to extremely small concentrations of dioxin (TCDD)
- Giving mice 10 ng/kg (**10 ppt**) of TCDD one week before they were exposed to influenza A viruses, **doubled the mortality rate** among the mice.
 - Researchers noted that this was the “smallest toxic dose ever demonstrated” to inhibit the ability of the immune system to ward off the flu.”
 - Burleson, G. R., et al. “Effect of 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) on influenza virus host resistance in mice,” *Toxicological Sciences*, 29 (1996): 40–47.

Effects of dioxin on the immune system

- Dioxin inhibits the “ramping-up” response; ie. the massive increase in CTLs, doesn’t occur.
 - The needed killer cells are not produced
 - The functional capacity of the CTLs in circulation is significantly compromised.
 - Warren, T. K., et al. “Exposure to 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) Suppresses the Humoral and Cell-Mediated Immune Responses to Influenza A Virus without Affecting Cytolytic Activity in the Lung,” *Toxicological Sciences* 56 (2000): 114–123.

Effects of dioxin on the immune system

- TCDD causes a disruption of cytokine activity in lung tissue, suppressing the production of IL-12 and increasing IFN by **more than ten-fold**.
 - Rampant production of IFN leads to massive inflammation, killing infected cells, but also causing extreme damage to normal lung tissues.
 - The runaway hyper-production of IFN and other inflammatory cytokines is called a **“cytokine storm”**
 - Warren, T. K., et al. “Exposure to 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) Suppresses the Humoral and Cell-Mediated Immune Responses to Influenza A Virus without Affecting Cytolytic Activity in the Lung,” *Toxicological Sciences* 56 (2000): 114–123.

Effects of dioxin on the immune system

- It has been shown that HPAI viruses are potent stimulators of the immune system, leading to high levels of cytokine production
- But *the combination of an influenza infection and dioxin caused so much inflammation in the lungs—*due to a massive cytokine storm—that the lung tissue was destroyed, doubling the death of the mice that with influenza exposure alone.
 - Luebke, R. W, et al. “Mortality in dioxin-exposed mice infected with influenza: mitochondrial toxicity (Reye’s-like syndrome) versus enhanced inflammation as the mode of action,” *Toxicological Sciences* 69 (2002): 109–116.

If migratory birds—as well as chickens, ducks and humans—are exposed to H5N1, then they can experience a higher mortality due to their dioxin-laden tissues.

Chemical Contamination and H5N1 outbreaks around the World

● China:

- The world's second largest per capita egg consumer, possibly as much as 45 ppt of dioxin per day just from eggs
- The **Yellow** and the **Yangtze Rivers** have been classified as “unsuitable for human contact, irrigation, and agriculture.”
 - More than 1.7 billion metric tons of unprocessed manure was dumped into the Yellow River in 1995 alone.
 - More than 23.4 billion tons of sewage and industrial waste are dumped into the Yangtze River each year
- The list of river pollutants includes industrial chemicals, heavy metals, dead animals, and untreated human excrement.

Chemical Contamination and H5N1 outbreaks around the World

● China:

- China is home to nine of the ten cities with the world's worst air pollution
- Respiratory diseases linked to air pollution are the leading cause of death among both children and adults throughout China
 - *World Resources Institute, Urban Air Pollution Risks to Children: A Global Environmental Health Indicator. Nov. 1999.*

Is it any wonder that bird flu cases have been identified across China?

Chemical Contamination and H5N1 outbreaks around the World

● Turkey: Dogubayazit

- The far northeastern corner of the country, approximately 35 miles from the Armenian border. The Aras (Araks) River forms the boundary between Turkey and Armenia
 - **River Pollution:** pesticides, herbicides, ammonia, arsenic, heavy metals, oil products, phenols, human sewage and other hazardous substances
 - **Radioactive waste:** The nuclear power plant located in Metzamore, Armenia, a short ten miles from the Turkish border where the H5N1 outbreaks were first reported
- During the annual spring melt, rivers swell and spread toxic contents across agricultural lands and villages; contamination enters the food chain into free-ranging chickens, ducks, migratory birds, and humans.

Chemical Contamination and H5N1 outbreaks around the World

● Turkey: Ankara

- Chemical industry: comprised of more than 6,000 production facilities for petrochemicals, fertilizers, paints, pharmaceuticals, soaps and detergents, cosmetics, synthetic resins, and plasticizers
- With little or no attention to the proper disposal of chemical waste, it is only a matter of time before more sick chickens, sick migratory birds, and sick humans are identified across the country.

Chemical Contamination and H5N1 outbreaks around the World

● Eastern Europe

- The following is a partial list of chemicals that were released into the atmosphere, water, and soil during the NATO bombing of the Balkan states:
 - Phosgene
 - Oils and petroleum products,
 - polychlorinated biphenyls (PCB's)
 - Ethylene dichloride
 - Hydrogen chloride (1,000 tons released into the river)
 - Vinyl chloride monomer (VCM) (1,000 tons released)
 - Eaton, Janet PhD “Ecological and Health Consequences of the NATO Bombings of Pancevo and other Petrochemical and Chemical Industrial Complexes,” International Action Center, 10 June 2000.
- Black clouds containing **petrochemicals, mercury, and other pollutants from burning oil refineries and fertilizer plants** delivered contaminants across a 20,000 square mile area.

- The chemical contamination accumulated from past wars may certainly be contributing to the immunosuppression and the increased susceptibility of local residents to the inflammatory effects of INFLUENZA VIRUSES.

Is it any wonder that bird flu cases have been identified across Turkey and Eastern Europe?

Chemical Contamination and H5N1 outbreaks around the World

● IRAQ:

- **Depleted uranium**, known as DU, is the byproduct of the process that separates natural uranium used in nuclear bombs from uranium used for reactor fuel.
- Since 1991, the environment of Iraq has suffered from the depleted uranium weapons by U.S. in the Gulf War I.
- When missiles containing DU hit the ground, they ignite on impact, releasing a firestorm of DU oxide particles exploding into the air.
 - The extremely fine residue of uranium dust can be carried by the wind for miles, contributing to the absorption of the poison by humans, plants, and animals in locations many miles away.
 - Accumulating in the soil essentially forever, DU remains radioactive for about 4.5 billion years.
 - Al-Azzawi, Dr. Souad N. “Testimony on Radioactive Contamination in Iraq Environmental Damages of Military Operations During the Invasion of Iraq (IIMO) (2003–2005).” World Tribunal on Iraq, 25 June 2005.

Chemical Contamination and H5N1 outbreaks around the World

● IRAQ:

- 2001: Study by three leading international radiation scientists cautioned that humans could contract cancer after exposure to DU dust.
 - The paper was reportedly blocked from publication by the WHO; the author was refused permission to publish the study.
- Baverstock's study suggested that even DU exposure could harm cells by a phenomenon known as "the bystander effect."
- **This undermines the strength of the body's immune system**
 - Edwards, Rob. "WHO 'suppressed' scientific study into depleted uranium cancer fears in Iraq," *Sunday Herald* (Glasgow), 22 February 2004.
- Braverman stated the DU used in Iraq could have been contaminated with plutonium and other radioactive waste, making it even more radioactive and more dangerous.

Is it any wonder that bird flu cases have been identified in Iraq?

Chemical Contamination and H5N1 outbreaks around the World

● Nigeria:

- The arrival of seasonal migratory birds were immediately blamed.
- POPs are still in wide use in Nigeria in the agricultural, trading and public health sectors especially among subsistence farmers and the rural populace.
- **AFRICA:** More than 50,000 tons of obsolete pesticides and seriously contaminated soils have accumulated throughout Africa over the last four decades, with less than five per cent of the stockpiles being disposed of, creating a dangerous threat to the health of both rural and urban populations.
 - Curtis, Clifton. “Time to clean up the chemicals in Africa,” *Khaleej Times*, 6 February 2006.

**Should it be any surprise
when more bird flu cases
are identified across Africa?**


Chemical Contamination and H5N1 outbreaks around the World

● South America

- Pesticide used in Latin and South America has been causally linked to the death of 4,100 Swainson hawks to poisoning by pesticides.
- A Pulp mill in Chile has devastated one of South America's most biologically outstanding wetlands.
 - “This was an area that was once teeming with water birds. Within the space of just months, it has become an empty expanse of brown, polluted water. It is a water desert. Words really can't describe the magnitude of the disaster here.”
 - “Pulp Mill Devastates Swans' Sanctuary In Chile,” *World Wildlife Fund*, 21 November 2005.

● India

- At least 47 migratory birds were found dead in northern India; the investigation found that mercury poisoning was responsible for the deaths
- A “highly toxic fertilizer” has been used near the site of a bird sanctuary near Delhi, resulting in the daily deaths of dozens of crows and other birds.
 - Kumar, Lalit. “Mercury may have caused bird deaths,” *The Times of India*, 6 February 2006.

- 
- **Wild ducks and geese are highly peripatetic, moving from one water locale to another, eating small fish living in contaminated water and plants growing from contaminated soil.**
 - **Pesticide used in Latin and South America has been causally linked to the death of 4,100 Swainson hawks to poisoning by pesticides. Couple this with any HPAI virus, and massive lung inflammation can occur resulting in death. The reported outbreaks among migratory birds must become a wake-up call for the world's countries and international organizations to get serious about improving the environment. The birds are nature's way of sending an urgent message of impending disaster, similar to the message of dead canaries in the coal mines.**

Migratory birds

Canaries in the Coal Mines

**IT'S ONLY A MATTER OF TIME
BEFORE "BIRD FLU ARRIVES" EVERYWHERE.**

Effects of Influenza on the immune system

- Symptoms observed included fever, cough, shortness of breath, elevated liver enzymes, pulmonary infiltrates (pneumonia), and lymphopenia (low white blood cell count.) Upper respiratory tract symptoms were only rarely present.
 - “Avian Influenza A(H5N1) Infection in Humans.” *New England Journal of Medicine* 353 (2005): 1374–1385.
- All of these symptoms are similar to those observed in TCDD-laden mice that are exposed to influenza virus.

Consider this:

- **Patients ultimately diagnosed with H5N1 present with pneumonia:**

- Symptoms observed included fever, cough, shortness of breath, elevated liver enzymes, pulmonary infiltrates and lymphopenia (low white blood cell count.) Upper respiratory tract symptoms were only rarely present.
 - “Avian Influenza A(H5N1) Infection in Humans.” *New England Journal of Medicine* 353 (2005): 1374–1385.
- The overabundance of mucous creates the perfect environment for the rapid replication of influenza viruses.
- If the mucous contains a mixture of dioxin and other chemicals, the likelihood of death from influenza can be exponential.
- **The identification of H5N1 may be completely irrelevant to the condition/demise of the patient.**

From Chemicals....

.....to Nuclear Waste

The Effects on Migratory Birds

Sick Migratory Birds and Nuclear Waste

- **The Tibetan Plateau is the planet's largest and highest plateau.**
 - **It is home to the 14 highest peaks in the world.**
 - **The ten major rivers flowing from its glaciers, sustaining 85 percent of Asia's population—47% of the world's population**
 - **Nuclear-related pollutants have massive implications for nations downstream.**

Sick Migratory Birds and Nuclear Waste

- Lake Kokonor is a watershed that eventually becomes the Yellow River, one of the two largest rivers in all of China.
 - A survey completed in 1994 found that only 32 percent of China's river water met the national standards for drinking water. The health of these water systems determines the survival of most inhabitants—human, animal, and bird—throughout China and Southeast Asia.
- The largest lake in China, Qinghai Lake (Lake Kokonor) is an important rendezvous site for migratory birds traveling from Southeast Asia to the Central Asian winter breeding grounds
- At any one time more than 300,000 fowl can be wafting across its waters.
 - The largest contingency spends its time on Bird Island during the nesting season (May–August) and during seasonal migration (Mar-May and Aug-Nov)

Sick Migratory Birds and Nuclear Waste

- **Radioactive waste generated during weapons production was reportedly dumped into the lake from the Chinese Research Academy well into the 1980s. It continues today.**
 - **Without data, there is no mechanism to assess the cumulative amount of radioactive pollution released into the rivers, pastures, and surrounding lakes.**

Sick Migratory Birds and Nuclear Waste

- Although specific research documenting the effects of nuclear contamination on birds breeding on Bird Island has either not been done or is highly classified, evaluation of the state of waterfowl exposed to nuclear wastes in the U.S. can give insight into the health risks posed to migratory birds by radiation-contaminated waters in China and Southeast Asia.
- For more than 40 years, the U.S. government produced plutonium for nuclear weapons at the Hanford Site in south central Washington State. From World War II until the early 1970s, Hanford released radioactive elements and other materials directly into the Columbia River.
- Weeds and other algae have a remarkable capacity to concentrate radionuclides up to 100,000 times the levels found in the water. Resident fish collect higher concentrations through skin absorption and also through consumption of aquatic grasses and insects.
 - Markham, O. D., Halford, D. K., Rope, S. K., Kuzo, G. B. "Plutonium, Am, Cm and Sr in ducks maintained on radioactive leaching ponds in Southeastern Idaho," *Health Physics* 55 (1988): 517–524.

Sick Migratory Birds Easy Scapegoats

- **Despite little evidence, government officials in Britain, Russia, Ukraine, Romania, and Turkey shockingly asked hunters to shoot down as many incoming ducks and geese to test for the H5N1 virus.**
- **The WHO had the foresight to declare that wild birds should not be culled; experts warned that some migratory species are rare and their extinction could have far-reaching ecological consequences.**
 - **“Avian influenza A(H5N1)—update 31: Situation (poultry) in Asia: need for a long-term response, comparison with previous outbreaks,” World Health Organization, 2 March 2004.**

Sick Migratory Birds Easy Scapegoats

- **Deaths in migratory birds occurring at the same time or in the same vicinity as outbreaks and deaths among domestic birds do not mean that the events are related.**
- **In the vaccine world, the defining phrase for this apparent connection is “temporal association does not prove causality,” meaning, when two events occur at nearly the same time, one doesn’t necessarily cause the other.**
- **In other words, even though H5N1 has been detected in sick chicks and dead migratory birds in close proximity to each other, one didn’t necessarily infect the other.**

Sick Migratory Birds Easy Scapegoats

- Wild birds and domestic chickens may better be described as the *victims of bird flu, not the vectors*
- H5N1 is a *contributing factor* to the demise of birds loaded with toxicities rather than the *causative factor*.

**“Sick birds don’t fly far and
dead birds don’t fly at all.”**

Wendy Orent. *Los Angeles
Times*, 23 October 2005.

The 1918 Pandemic Revisited: The Case for a Chemical Connection

- **During World War I, chemists on both sides investigated more than 3,000 chemical substances for potential use as weapons.**
- **By the summer of 1917, when U.S. troops began to arrive at French ports, chemical warfare had become commonplace even though minimal preparations had been made to protect US troops**
 - **On the eve of the American intervention, more than 12,000 troops were advanced to within thirty miles of the front, all without gas masks or training in chemical warfare.**

The 1918 Pandemic Revisited: The Case for a Chemical Connection

- Gas training camps for the army began January 1918
 - Training consisted of a brief lecture and daily gas mask drills
 - The training included putting the masks on and off while sitting in a chamber filled with chlorine gas.
 - Next, the troops entered a chamber filled with a tear agent for five to ten minutes where they continued to practice masking and unmasking under duress.
- At peak times more than 2,000 men a day were put through this initiation.
- By the summer of 1918, all recruits were required to receive this “standardized chemical warfare training.”

**IT WAS A CASE OF THE FLU REPORTED ON
MARCH 4, 1918 AT FORT RILEY THAT HAS BEEN
CREDITED FOR THE START OF THE SPANISH FLU**

The 1918 Pandemic Revisited: The Case for a Chemical Connection

- Phosgene, mustard gas, chlorine gases, and the thirty-odd other chemicals released into the environment during three years of daily explosions could have traversed the globe, increasing the susceptibility to death from influenza to civilians.
- **This is not as outrageous as it may sound.**
 - Pollen has been discovered deep in the ice of Antarctica.
 - Dust from China has been found in the U.S. after massive wind storms
 - The smoke and particulates from the massive fires in Indonesia were measured in the air halfway around the world.
 - Satellite instruments showed that sulfur dioxide released during the eruption of Mt. Pinatubo in 1991 circumvented the globe in only three weeks, and then slowly dispersed to cover much of the Earth in the following two years.
 - Sparks, S. & Self, S., et al. "Super-eruptions: global effects and future threats," The Geological Society of London, June 2005

The 1918 Pandemic Revisited: The Case for a Chemical Connection

- An unusual feature of the Spanish flu was the age-mortality curve.
 - Flu usually kills young children and the elderly, but this version largely took males between 19 and 34 years of age.
 - The disease's effect on military age men was so great that the American draft was suspended in October of 1918 due to the epidemic.
- The Germans requested a ceasefire on October 3, 1918
- On November 11, 1918 the armistice was signed.

Interestingly, by December 1918, approximately 18 months after the epidemic began, the outbreaks stopped and the flu **“mysteriously” disappeared.**

Tying it All Together...

What do sick chicks in the U.S., sick chicks and sick people in Southeast Asia, and sick migratory birds all have in common?

An Unhealthy Terrain



The Germ Theory of Disease

- **The Germ Theory is credited to Louis Pasteur**
 - Pasteur's mechanistic idea of disease—finding the right cure (drug) for each germ—engendered the growth of the pharmaceutical empire and its dominance over medicine today
- **The most vocal and visible figures who debated Pasteur were Claude Bernard and Antoine de Béchamp.**
 - “The terrain is everything; the germ is nothing,”
 - The great debate that has continued to this day

- On his deathbed, Pasteur reportedly said:

“Bernard avait raison. Le germe n’est rien, c’est le terrain qui est tout.”

(“Bernard was right. The germ is nothing, the soil is everything.”)

- DeAngelo, LeAnna. *Germs On Our Mind: The Psychology of Contagion*, Washington: New Academia, 2005

A new look at germs...

- In fact, it may very well be that microbes, both bacteria and viruses, are here on the planet to induce the highly reactive inflammatory response, a modified cytokine storm, helping the body to detoxify.
- It would be very interesting to test the secretions that are expelled during a bout of “the flu” for chemicals and heavy metals.
- Instead of being the problem, viruses may be part of the solution, acting as the “clean-up crew,” assisting the body to detoxify and eliminate the remains of chemicals, pharmaceutical drugs, heavy metals including mercury, and other environmental insults.
- It should be noted that the human race evolved *because of its relationship to microbes, not in spite of it.*

The Answer: Enforce the Current Environmental Treaties

- The First Stockholm Convention on Persistent Organic Pollutants (POPs) held in Argentina in May 2001 was convened to address POPs that are
 - (1) intentionally produced, such as pesticides, herbicides, and insecticides;
 - (2) intentionally produced but restricted in use, such as DDT for control of malaria; and
 - (3) unintentionally produced and released, such as dioxin from herbicides and from burning plastics.

The Answer: Enforce the Current Environmental Treaties

- The Second Swedish Convention went into force in May 2004
- The Treaty was developed to reduce and eventually eliminate a group of chemicals coined as the “Dirty Dozen” by the United Nations Environmental Program.
- These 12 chemicals include:
 - **eight pesticides** (aldrin, chlordane, DDT, dieldrin, endrin, heptachlor, mirex, and toxaphene),
 - **two industrial chemicals** (polychlorinated biphenyls and hexachlorobenzene), and
 - two unintended by-products of chemical production, **dioxins, and furans.**

Conclusions

- “Garden variety” influenza infections and H5N1 have both been associated with mild infections and “garden variety” influenza virus, when coupled with dioxin, can cause deadly disease.
- It is unlikely that H5N1 will become a “pandemic” in the immediate future because mortality will be limited to those who have a substantial total body burden of dioxin.
- Coupling chemical contamination with sick birds and the need for Tyson-like companies to expand their market share, culling and media alerts of “bird flu outbreaks” are no doubt examples of things to come.

Conclusions

- Sporadic cases of death in the presence of HPAI will no doubt continue to occur.
 - However, without enforcing cleanup programs for global natural resources—food, water, and air—world citizens will continue to accumulate pollutants in their fat tissues.
- The correlation between dioxin, POPs, and the proliferation of H5N1 is being overlooked by health professionals and WHO officials due to their myopic fixation with the germ theory of disease
 - There is no interest in identifying the bodily conditions in which H5N1 can proliferate
- The risk of a pandemic outbreak will increase, but not because a virus has “swapped surface antigens” or “jumped species.”
- It will occur due to increased contamination of the human terrain with dioxin.

Conclusions

- The bottom line of all tinkering by the WHO, the EPA, and other international governmental organizations to determine “safe levels” of a known carcinogen is absolute nonsense.
- A chemical that has been proven to cause cancer, neuro-developmental defects, reproductive toxicity, and can greatly increase the risk of death from influenza does not belong in the body.
- Massive doses, many times the level of “safe dioxins,” are being ingested by world citizens on a daily basis.

Conclusions

- **Culling chickens and creating dangerous vaccines is not the answer.**
- **Stockpiling worthless drugs is not the answer.**
- **Cleaning up the environment, improving practices of animal husbandry, and eliminating corporate greed at the expense of the earth and its inhabitants are what need to be done.**

What You Can Do

What is it going to take to get you to engage?

- You have been methodically stripped of your Constitutional and civil rights to refuse mandatory medication and vaccines forced on you and your children by the government.
- Millions of innocent men, women, and children have been bombed and burned by billions of pounds of chemicals and DU.
- Our food supply is being genetically manipulated into commodities that have not been proven to be safe and may very well be making us sick. Now, pharma has been handed government protection for even faulty products.
- Animals are being killed mercilessly for profit.
- The farmers of the world are being systematically turned into serfs, no different than the feudal system of the Dark Ages.

WHERE IS YOUR OUTRAGE?

What You Can Do

- There are 300 million Americans across this great land; there are about 1,000 politicians and bureaucrats in Washington.
- They are *our* employees, we pay their salaries, and they give themselves outrageous raises and benefit packages without our permission that we can't afford to pay. They are stealing from our company—our Country—and **giving us orders**.
- *Would you let your personal employees get away with that?*

**WE SHOULD BE MARCHING IN THE STREETS—
WORLDWIDE—AND THEY SHOULD ALL BE FIRED.**

What You Can Do

- What is happening is both a temporal and a spiritual battle.
- Everyone here is equally responsible for the fate of the earth but those with means have a more significant role and more accountability.
- Use whatever resources you are blessed to have to get active.
- If you can't get motivated enough to get engage for yourself, do it for your children and your grandchildren.

What You Can Do

- **Get involved. Get more informed. Take any issue that speaks to your heart. You can't do them all, so pick one and give it your all:**
 - Stopping mandatory vaccination
 - Boycotting GM food products
 - Animal rights (including the rights for humane handling of poultry)
 - Environmental cleanup projects
 - Stopping the use of chemical warfare
- **For every issue there are organizations out there working feverishly to oppose corporate greed and increase accountability.**
- **They need your support, your finances, and most importantly, your time.**
- **You can continue to complacently sit on the sidelines, or you can choose to make a difference. The time has come for everyone to participate.**
- **There is no time left for passivity.**

THANK YOU...

For more information AND daily
updates, see

www.BirdFluHype.com

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OsteoMed II
7271 Engle Road, #115
Middleburg Hgts, Ohio
W-440-239-3438
F-440-239-3440
www.OsteoMed2.com

WWW.DRTENPENNY.COM
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Sherri J. Tenpenny, D.O.



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