Evolution towards Plant-Based Food

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Introduction.....3
Epidemics since mid last century.....5
Factory Farming since late 1950‘s.....11
Increase in Cancer is a Recent Event 16
The Blueprint of cancer 21
Animal-Based Foods and Climate.....25
Animal-Based Foods are related to Colorectal and Breast Cancer.....27
Bovine infectious factors in colorectal cancer 27
Bovine Leukemia Virus was detected in breast cancer tissue of women.....27
Are human breast and ovary cancer zoonoses? 28
Insufficient pasteurization of chicken egg whites.....31
Breeding of Tropical Birds and Pigeons as a Hobby is related to Lung Cancer.....33
Cancer mortality in poultry workers.....35
Carrier pigeons are a source of Chlamydia pneumonia...36
Malignant lymphomas were related to Chlamydiae 36
Cancer Treatment.....40
Evolutionary Progress 46
Evolution to Plant-Based Food is inevitable 48
Towards Healthy Aging 55
References of the Main Topics 58
Author Bio.....72

Introduction

Consider the **DISADVANTAGES** of the consumption of meat and animal fat, and the breeding of tropical birds for leisure and the breeding of animals for consumption solely.

- an increase in diseases transmitted from livestock to humans
- zoonoses as BSE, SARS, MERS, Q Fever and the spread of multi-drugs resistant bacteria were the result
- after the abolition of slavery in the mid 19th century, the international exotic pet trade, the international human trafficking, the arms industry and drug trafficking are the most profitable forms of trade. Worldwide, an estimated 40,000 primates, 4 million exotic birds, 640,000 reptiles and 350 million tropical fish are traded live each year. Wildlife trafficking in exotics is estimated a 6 billion USD industry.
- intensive breeding for profit of pigs, poultry, cattle and fish became the new business model mid 20th century
- live animal-based food markets are related to human highly pathogenic influenza as H5N1
- increase in cancer is, very recently, since mid 20th century
- oncogenic retroviruses as chicken and bovine leukemia viruses are now detected in our food chain with more refined lab methods
- bovine leukemia virus was detected in breast cancer tissue of women
- consumption of meat is related to colorectal cancer
- common bird flu infections with Chlamydiae were found to be related to lung cancer and malignant lymphoma
- climate change. In the last 50 years, our diet has become increasingly unnatural. Meat, milk and eggs in our diet contribute more to climate change in the world than the emissions of our fleet. The rapidly growing

meat industry produces more greenhouse gases than all the traffic together

- fatter beef meat, chicken meat and pig meat contain more saturated animal fat and cause more welfare diseases like cerebrovascular disease, obesity and common cancers.

Change towards strictly plant-based foods is not easy. The image of the classic vegetarian complicates this transition.

Epidemics since mid last century

Beware All Kinds of Flu

Highly pathogenic viral diseases like bird flu and swine flu have strong links with intensified farming. The highly pathogenic H5N1 virus emerged during a time of massive expansion of the poultry industry in the Far East. Birds are virus disseminators above all other animals. Waterfowl spread avian influenza. Caged birds spread herpes viruses, retroviruses and the smallest bacteria such as Chlamydiae. There have been outbreaks of avian influenza on egg farms. Free-range birds came into contact with the battery egg-layer hens, so one might come to the conclusion that the infection was via virus-shedding wild birds. Wild ducks spread all avian influenza virus strains. The overwhelming majority of studies of different designs (including all the mortality and cancer incident studies) indicate at least a 30% excess risk of lung cancer in meat and poultry plant workers, even after controlling for smoking. Evidence points to animal oncogenic microorganisms as one of main causes. This has important public health implications because the general population is also widely exposed.

Laying hens and eggs are contaminated with oncogenic viruses

Battery laying hens have retroviruses attracted of the mice on the grain stocks. Eggs were therefore permanently infected. By consumption of undercooked egg-proteins, there is an increase of ovarian cancer, breast cancer and prostate cancer in humans. Retrovirus secreting mice also come into contact with free-range chickens. Free-range chickens are often kept outdoors so that the risk of contamination through the pollution of food on the ground may be greater from mice feces. In the winter months, mice more than likely go to aviaries and poultry farms to collect scraps of food. Virus bearing and virus-secreting mice, cereals, chicken feed, poultry infection, vertical transmission of retroviruses via eggs and processing of raw protein in Bavarian cream and other confectionery products occur, man being the terminus. In practically all poultry farms retroviruses,

which are closely related to mouse mammary tumor retrovirus (MMTV), can be found. Laying hens have a high rate of ovarian tumors (Johnson 2013), but such tumors are uncommon in hens less than 2 years old. Oviductal and ovarian tumors are generally not differentiated, and genital tumors occur mainly in hens above the age at which most are slaughtered. In commercial poultry operations, hens are usually sacrificed after their first year as layers, aged between 22 and 24 months. Humans are commonly exposed to potentially oncogenic viruses that naturally infect and are frequently endemic in animals, which are part of the food chain, such as laying hens, chickens and eggs. Raw egg proteins very often contain retrovirus. Egg protein is often undercooked.There is now widespread immune tolerance in humans to retrovirus. Latent persistent mammary infections with retrovirus are very common. Practically all milk contains retrovirus antigen. After the menopause biological regression occurs with immune reduction, which may result in tumor growth. Retrovirus has been found in breast cancer cells, removed from women but not in healthy breast tissue. Recently it was shown that the retrovirus is able to lodge itself in human mammary gland cells and to multiply.

Broiler chickens spread multi-drug resistant bacteria

The meat of broilers is increasingly infected with antibiotic-resistant bacteria such as MRSA staphylococcal and VRE intestinal bacteria. More antibiotics are given to farm animals than to sick humans. Intensive pig and poultry farmers and their household members, chicken meat and pig meat are increasingly infected with multi-resistant bacteria.

Repeated urinary tract infections in women are often the result of a zoonosis

Chicken is contaminated with coliform bacteria and infection in the kitchen is hardly to prevent. Bloody diarrhea after eating undercooked chicken or pork, for example, after a barbecue, is a dangerous phenomenon. In some cases, bloody diarrhea is caused by multi-drug resistant Coli bacteria. Especially in women these intestinal bacteria reach

the bladder (Yamamoto S 1997). The bacteria attach to the bladder wall, and hardly respond to treatment with antibiotics. The urine is bloody. Not infrequently, these bacteria go higher and reach the kidneys via the ureter. Entero Hemolytic E. coli bacteria (EHEC) can cause severe renal failure.

The mad cow disease (BSE) was spread through infected meat

At the end of last century meat and bone meal, as sheep heads, were given to British cows. Natural herbivores – grass and hay eating cows – turned into carnivores, feeding them meat and bone meal, in stead of grass, for faster growing and more financial profit.

Beef, chicken and pig meat contain more saturated animal fat

Anchovies from the southeastern Pacific Ocean are sold for animal feed in Europe's factory farms. Chicken nuggets or pork chops can have a strange aroma. Around one third of the total fish catch is being fed to farmed animals, usually farmed fish, pigs and chickens. The animals fatten and grow faster in order to gain more profit and to shorten the slaughter time. Over the last decades, the production of fish oil and meal has removed around 20-30 million tons of fish from the south-eastern Pacific Ocean, anchovies, herring, mackerel and sprat species.

Intensive cattle, pig and poultry farming by feeding the animals with soya meal and even fish meal and low doses of antibiotic growth promoters fatten the animals and let them grow faster. Fatter beef meat, chicken meat and pig meat contains more saturated animal fat and cause more welfare diseases like cerebro-vascular disease, obesity and diabetes.

Colistin-resistant E.coli bacteria are already found in China

Colistin is widely used in Chinese livestock food, and this use probably led bacteria to evolve and gain resistance to the drug. The deadly pandrug resistant strain was later discovered in Europe, Afriaca, South America and Canada.

Intensive goat farming causes spread of Q fever

Goat feces and dirty bedding straw were shoveled up and carried outside by the farmers to fertilize their fields. In this way the Coxiella bacteria became airborne and infected people in the Netherlands.

Bush meat and slaughter of chimpanzees are seen as the cause of global spread of AIDS

HIV spread to humans through human consumption of the meat of wild animals (chimpanzee and gorilla) in Central Africa. During the 20th century, commercial hunting using firearms and wire snares to supply lodging and oil exploration operation concessions along new roadway networks has dramatically increased the catch in Central African forests. Annually, it is estimated that 579 million wild animals are caught and consumed in the Congo basin, equaling 4.5 million tons of bushmeat.

Zika virus

Yellow fever researchers working in the Zika forest in Uganda stumbled onto it. They had a macaque in a cage and it developed a febrile illness from something that was transmissible. The virus was described as Zika virus in 1952 and then found in people a couple of years later. Monkeys are susceptible for the virus. When it was a flu-like illness confined to some regions in Africa, Zika wasn't a high priority so research hasn't been extensive. The health risk for humans in areas where the virus is circulating (areas where there are *Aedes egpyti*, malaria mosquitoes) was very low. Most people that are infected don't get sick at all, and when they do, they usually get only mild signs of illness that resolve on their own. In the past few years, Zika virus has emerged in the Americas, particularly Brazil. Very recently, a link between infection of pregnant women and birth defects - babies born with small heads and brains (microcephaly) has been reported, predominantly in Brazil.