

## Good Practice and Adverse Drug Reactions

Maxime Coles MD

A- We have already discussed these issues in one of our AMHE Newsletter, about the tiny particles commonly found in plastic bottled water and food containers. The question is still being asked if such particles are affecting the human health. Can we avoid absorbing them in the system? Indeed, they can make their way to any organs like liver, brain or kidneys. This is going to be a field where researches have not been too conclusive. It is known that plastics breaks down over time and form the microplastic that seeds all over the body, according to the NIH, to form the Nano-plastics, the size of a pencil head.

It seems that new imaging techniques have helped researchers to collect 240,000 fragments of plastics and 90% of the particles were found to be nanoplastic. The study was published in the "Proceedings of the National Academy of Sciences (PNAS)". They also mentioned different type of plastics especially "polyamide", polyethylene terephthalate, polyvinyl chloride, polymethyl methacrylate and polystyrene being used in the process of filtration and purification of the water.

These new imaging techniques will allow researchers to detect such particle more accurately and hopefully we will be able to determine their effects on our health. I am not suggesting one to stay away from the water bottles but one has to understand that this may generate more problems

especially when more and more people are using such product in their household, at work or everywhere else. The microplastic and nanoplastic problems are there to stay and we know partially that they may harm your health.

The New England Journal of Medicine has already published paper stating that people with microplastics and nanoplastics in their arteries were found to have a higher risk for a heart attack and stroke, in a study performed on 200 patients. Preliminary research so far has shed some light on potential health effects of microplastics and nanoplastics. Scientists like Dr Blumenberg have admitted that there are a lot of other additives and chemicals in the plastics such as polyfluoroalkyl (PFAS), bisphenol A (BPA) and Phthalates which can as well contribute in harming human health.

Such substances like PFAS have been linked to cancer, impacting the liver and heart and immune developmental damage to infants and children. BPA is associated to High Blood Pressure and Diabetes while phthalates affect the reproductive system. Those substances are endocrine disruptors as recognized by the NIH.

To reduce exposure to these substances, the EPA has recently announced a water standard that will require most states in the USA to limit these chemicals from tap water per 100 million people, especially when there are so many communities in the US who have seen people get sick from drinking water tainted by companies dumping PFAS-containing waste into the water table. It remains safer to drink tap water and switch to glass and stainless-steel bottles. I exhort everybody to follow such advices until science can be more specific on the best way in delivering bottled water to the population.

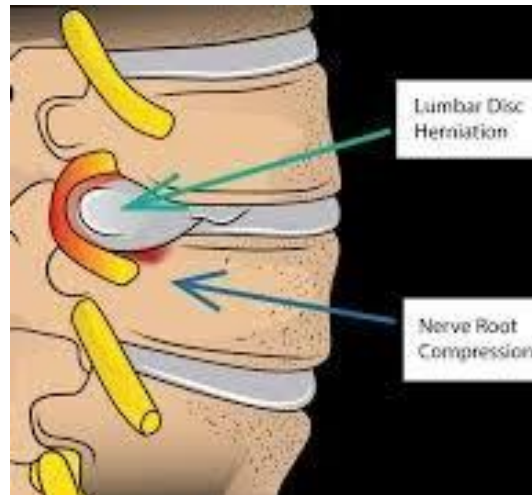
B- Are we in a pre-pandemic mode? This is the question that we may ask our health care specialist to answer, because the United States of America has ordered 4.8 million doses of a cell-based, adjuvanted H5-vaccine for avian flu preparedness. I just returned from a trip from Guatemala to check the premises for the AMHE next medical convention and I feel so bad about symptoms of cold with sneezing and coughing all the wee following my return.

Influenza vaccine producer CSL Seqirus was asked by the US Government to finish the process for a pre-pandemic vaccine to match the H5N1 strain. 4.8 million doses are expected to be delivered by the company's manufacturing facility in Holy Springs, North Carolina built in 2019 with a partnership with the Biomedical Advanced Research and Development Authority ( part of the US Dept Of Health and Human Services).

c- **Lumbar Disc Herniation**

Many recent studies have demonstrated a genetic predisposition for developing symptomatic lumbar disc disease (DDD) and once the disc show a certain level of destruction or herniation, compressions of the neurological structures will be consequent to a degenerative process.

It is always the best way to treat an aging spine with disc herniation with conservative therapy. In case of failure of such treatment a serial of epidural injections can be offered as a semi-invasive way of performing selective nerve roots infiltrations with local anesthetics or corticosteroids.



- Disc herniation in the lateral recess compressing the nerve root

In case a failure of these modalities of conservative treatment, and in front of a persistence in radiculopathy and neurological deficits as well as motor weakness or signs of conus or cauda equina compression syndrome, a surgical option can be offered. In cases where sciatica is present, many studies have demonstrated a superiority with the surgical treatment over the conservative treatment especially when leg pain was experienced. It appears that a more complete relief of radicular symptoms is experienced by patient undergoing surgical treatment following the 5 to 10 years after the surgery. The earlier the surgery was performed the better the results were compared to long-standing conservative treatment.

These observations contradict by much the Swiss school that has always taught to avoid performing surgical treatment because of the “once back pain, always low back pain” theory. Definitely, rapid relief is better obtained via surgical treatment. Nowadays, novel techniques of microdiscectomy via endoscope may find beneficial influence on the treatment of such patient because of the smaller surgical approaches and less trauma to the soft tissues, facilitating a faster recovery.

Many methods of conservative treatments with mechanical traction and physical therapy with abdominal and back, muscles rehabilitation has over the years helped patients with back pain. Early mobilization and bed turning have also improved activities following disc surgery, mixed with opioids medication.

but novel techniques with mini-incision, using the micro-endoscope has permitted the orthopedist or the neurosurgeons to perform a partial discectomy, annulus closure to relieve the radicular symptoms especially at the lateral recess where compression of the nerve roots are often observed.

Acupuncture has shown that that that fine needles can stimulate specific points, triggering the release of natural painkiller and anti-inflammatory hormones. His method can help addressing pain, stress and other issues related to the neurological component. Epidural injections have been used in the treatment of Lumbar Disc Herniation as well as injections with Platelet-Rich Plasma injections with some relief.

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*I exhort everybody to follow these advices* **Share This Story**