

Ozone Therapy by Fritz Schellander

Medical ozone therapy is quite new to Britain and only practiced by a very few doctors and practitioners. It is practically unheard of in the United States except in holistic circles. But in Germany where it has been in use since 1959, more than 3,000 doctors are reputed to be using it regularly and effectively.

What is ozone? Most of us are now familiar with ozone in the ozonosphere which shields the earth from harmful ultraviolet radiation. Many of us have experienced that curious, slightly pungent and characteristic whiff of ozone after thunderstorms when high-voltage lightning creates ozone from oxygen. Ozone is a gas, and energized form of oxygen with the chemical formula O_3 . It is unstable and disassociates readily back into oxygen (O_2), thus liberating so-called "singlet oxygen" (O_1) which is a strong oxidizing agent. It is this particular reactivity which provides the starting point for ozone's multiple effects within the body.

the different modes of action of ozone on a living organism are now well understood and involve the production of ozone-generated peroxides. It is these which are responsible for the remarkable bactericidal and fungicidal effects. The virus inactivation takes place in a similar way and is enhanced by a peroxide intolerance of virus-infected, weakened cells.

Peroxides are powerful, free-radical producers and as such could be harmful, but ozone has an advantage here which other free-radical producing agents do not appear to have: not only are normal cells protected from the oxidative stress effects of ozone if used in correct amounts, but - almost paradoxically - ozone appears to promote a stimulation and activation of the enzymes involved in peroxide and free radical scavenging (glutathione peroxidase, catalase and superoxide dismutase) thus enhancing immune responsiveness.

Improves Blood Flow In addition, ozone can be shown to have a measurable benefit on the uptake and utilization of oxygen through improved glycolysis in red blood cells, an improvement in blood flow through the abolition of [rouleaux of red blood cells](#) (the harmful stacking effect seen as a result of different surface charges on the red blood cell) the stimulation and activation of mitochondrial respiration and other metabolic pathways.

The textbook on ozone therapy by S. Rilling and Viebahn "*The Use of Ozone in Medicine*" explains in detail the historical, technical and scientific background to ozone therapy and is essential literature for anyone contemplating entering this field. All mammalian tissues depend for their survival and long-term health on an adequate oxygen uptake and therefore medical ozone as an essentially bio-oxidative therapy could benefit literally everybody who lives a western lifestyle, through optimizing tissue oxygenation.

The potential applications of medical ozone for preventative reasons are almost too numerous to list but should include performance enhancement, increasing longevity with good health, as part of rejuvenation programs, optimizing wound healing after operations, immune stimulation, as a general "tonic" and in geriatric medicine.

Bacterial and Fungal Infections When considering ozone strictly for the treatment of established ill-health, then three main areas may be broadly defined:

- The whole spectrum of acute and chronic viral, bacterial or fungal infections.
- All conditions in which a lack of tissue oxygen is either proven or must be presumed. These include heart disease and angina, cerebral and generalized arteriosclerosis and their complications, gangrene, some dementias, badly healing ulcers and varicose veins.
- A number of other unrelated conditions which have all been reported to have benefited from ozone therapy. These include arthritic conditions, ankylosing spondylitis, diabetes, cancers, Parkinson's Disease, inflammatory bowel disease, obesity, low immune functioning, allergies and asthma.

Clinical Performance How has ozone performed for us since we first introduced it into our clinic some 18 months ago? Undoubtedly the most rewarding, if not to say exciting, results have been seen with acute viral infections such as flu-like respiratory infections, herpes simplex (cold sores), and chronic fatigue syndrome. Many flu-like infections can be switched off with one or two injections of ozone.

With chronic fatigue syndrome our experiences are very exciting in as much as about one in five of our patients appear to get better almost overnight and lastingly so, after just one or two injections, even after suffering almost continuous ill-health for up to two years. This pattern appears to prevail in patients with very definite post-viral history.

Not a Panacea These results can be so dramatic that it almost comes as a disappointment when another patient does not show a similarly remarkable improvement. This probably only serves to show that Chronic Fatigue Syndrome must be a multifactorial illness and that you cannot rely on just one type of therapeutic intervention.

The use of ozone in the treatment of cancers ought to be mentioned here. Ozone has been used in the Donsbach hospitals in Mexico and Poland for several years now and has always been considered by them to be an essential part of any cancer therapy. It is important to understand the scientific rationale behind this thinking: Cancer cells do not rely as much on oxygen for their growth and metabolism as normal cells, but utilize more a glycolytic (fermentative) breakdown of sugars. This has been known since Otto von Warburg's Nobel prizewinning work in the early 1950's. Does this make cancer cells overly sensitive to intensive oxygenation or ozonation? It has indeed been shown that the direct injection of ozone into animal cancers resulted in large-scale tumor tissue destruction similar to that found after intensive radiation therapy. This is an exciting area where more research is required.

Ozone and Chelation Ozone combines extremely well with intravenous chelation therapy which is used to treat either arterial disease or heavy metal toxicity. This proving a most useful two pronged approach in treating occlusive vascular disease. Chelation therapy works quite slowly through a number of infusions. The forced ozonation provides an immediate oxygen boost to tissues which can noticeably reduce the incidence of angina.

Other Uses The medical use of ozone has an excellent safety record and no toxic effects have been observed from clinical use. Ozone is administered in a number of ways. The essential equipment is an ozone generator which is able to produce a specified amount of ozone from pure medical oxygen. This pure oxygen/ozone can be injected directly into a vein, muscle, soft tissues, joints and other cavities. Alternatively, blood can be drawn from a patient, mixed with ozone and re-injected. At the present time evidence is accumulating that repeated ozone insufflation may be as effective as ozonating blood that has been withdrawn and then re-infused.

Ozone Insufflation consists of the introduction of a small catheter into the vagina or rectum and the releasing of a predetermined amount of ozone directly into the cavity. Although there may be some disagreement as to the ideal amount of ozone needed to purify the area and allow enough oxygen to be released and absorbed to make a difference. Retention of the ozone-rich mixture allows absorption through the rich capillary bed, particularly in the rectum, and gives excellent results. Ear insufflation can also be accomplished, although not recognized by many. The nasopharyngeal area is often the site of chronic, minor infections which become acute in cycles. Chronic sinusitis is probably the most untreated common condition in our society today. The introduction of ozone into the ear canals can be of great benefit in reducing such chronic infections and offering better general health.

The use of ozone as a healing adjunct is well-established and is being vigorously pursued by many scientists and clinicians. The benefits are usually predictable and without side effects. As technology and innovation increase, new techniques emerge that will enlarge the scope of the effective use of this modality.

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