

# Views on Ozone Therapy

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Shaw Group Meeting - Bad Science

151102

# Origin

- ▶ Ozone treatment is used in the food industry
  - ▶ Kills bacteria/fungi
  - ▶ Increases shelf life
  - ▶ Chemical reactions with the food itself?
- ▶ Ozone is used to remove odors from rooms
- ▶ Hypothesis that ozone could be therapeutic



# Origin

Year	Use/treatment of/with ozone
1987	Abscess, acne, AIDS, allergies, cerebral sclerosis, circulatory disturbances, cirrhosis of the liver, cystitis, bedsores, gangrene, hepatitis, herpes, high cholesterol, colitis, tumors, cancer, osteomyelitis, Parkinson's, rheumatism, Raynaud's disease, scars, inflammation of the vertebrae, stomatitis, joint dystrophy, phlebitis, open sores, urology, vascular surgery, wound healing. <sup>[16]</sup>
1988	Herpes, AIDS and flu, wounds, burns, Staphylococcus infections, fungal and radiation injuries, and gangrene. Fistulae, hemorrhoids and anal infections. Diabetes and arteriosclerosis. Used in periodontal disease, mixed in water and swallowed for use on gastric cancer, and applied as a wash in intestinal or bladder inflammation. Mixed with olive oil it is used on fungal growths and skin ulcers. Ozone baths are used to irrigate the skin, to disinfect and treat eczema and skin ulcers. <sup>[17]</sup>
1989	Influence on tumor metabolism was observed, hence subsequently used in treatment of cancer. <sup>[18]</sup> There was significant increase IgG levels, hence was evaluated for its immunostimulatory activity. <sup>[19]</sup>
1990	Ozone in combination with 5-fluorouracil was shown to be synergistic <i>in vitro</i> against tumor cell suspensions, derived from the breast and the colon. <sup>[20]</sup> Ozonation of blood was carried out to treat viral diseases. Ozonation of blood was found to increase the release of lymphokines and the stimulation of peripheral blood mononuclear cells. <sup>[21]</sup>
1991	Ozone was found to have germicidal activity by the virtue of its oxidative destruction of micro-organisms including viruses and bacteria <sup>[22]</sup>
1992	Ozone therapy was used in rhinoplasty and it was found that there was a significant reduction in the postoperative complications. <sup>[23]</sup>
1993	Ozonated saline used as irrigating solution and was found to reduce abscess formation in the rats with fecal slurry in the peritoneal cavity. <sup>[24]</sup>

Elvis AM, Ekta JS. Ozone therapy: A clinical review. *Journal of Natural Science, Biology, and Medicine*. 2011;2(1):66-70. doi:10.4103/0976-9668.82319.

# Views

Ozone therapy is highly controversial

## Proponents

- ▶ Powerful oxidant cleanses body of pathogens
- ▶ Ozonated water is the highest attainable purity
- ▶ Often marketed as “miracle therapy”

## Opponents

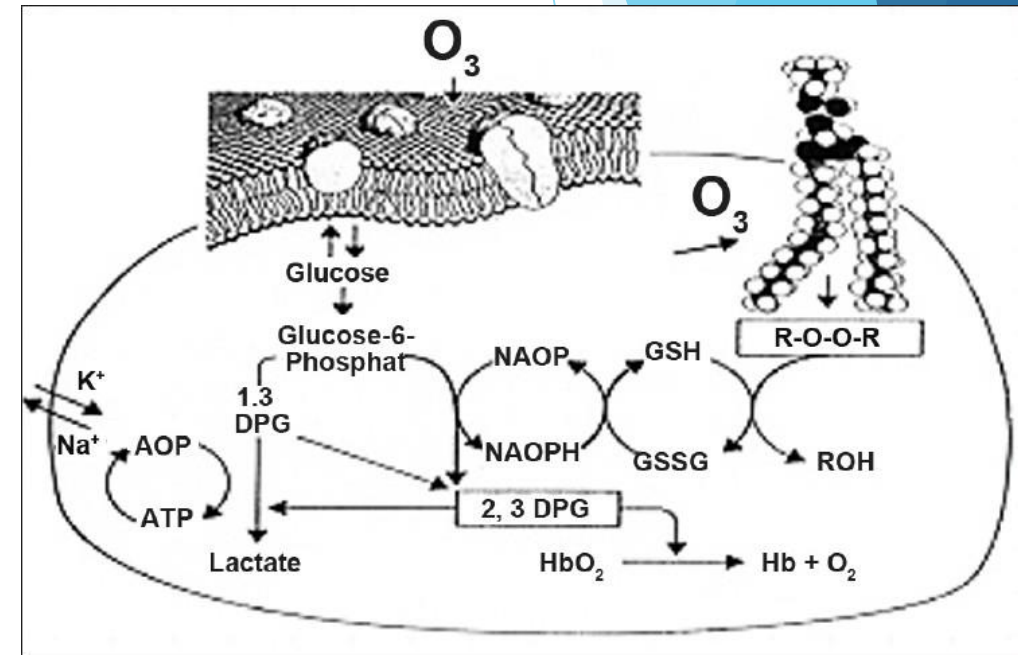
- ▶ Ozone is an oxidant and will damage healthy cells
- ▶ Claim that no scientific evidence exists proving that ozone is overall beneficial



# Clinical Review

- ▶ Saliva samples were taken from individuals with several oral infections
- ▶ Samples exposed to ozone for timescales of seconds to minutes
- ▶ Exposure for 10-30 s was found to kill a significant portion of the bacteria
- ▶ Exposure for 60 s killed 99.9% of the disease and degraded saliva proteins
- ▶ Authors acknowledged the advantages and disadvantages of ozone therapy

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# Unscientific Claims

## 100 Benefits of Ozone Therapy

1. Improved circulation
2. Cell energizer
3. Vitality booster
4. Immune enhancer
5. Skin purifier
6. Oxygenates hemoglobin
7. Neutralizes acid
8. Liver cleanser
9. Kills parasites
10. Combats chronic fatigue syndrome
11. Corrects dizziness
12. Blood purifier
13. Relieves muscle aches
14. Builds muscle
15. Combats depression
16. Neutralizes stomach acid
17. Overcomes weakness
18. Corrects memory loss
19. Enhances immune system
20. Fights bronchial problems
21. Prevents tumors
22. Decomposes plague
23. Increases cellular vitality
24. Boosts energy
25. Fights flu
26. Releases tension
27. Burns fat
28. Protects against stroke
29. Kills virus
30. Blood booster
31. Speeds healing
32. Improves digestion
33. Clears out brain fog
34. Cleans mucus
35. Kills candida
36. Improves heart function
37. Fights infection
38. Prevents sudden heart attack
39. Kills bacteria

## Ozone is 3000x the Power of Chlorine

<b>OZONE PREVENTS:</b>	<b>OZONE IMPROVES &amp; ENHANCES:</b>	<b>OZONE STOPS:</b>
PREMATURE AGING	CIRCULATION	ALL CANCER CELLS
IRREGULAR HEARTBEAT	MINERAL ABSORPTION	
LYMES DISEASE	AMINO ACID UTILISATION	<b>OZONE DETOXIFIES:</b>
CARDIAC ARRHYTHMIA	DIGESTION	LYMPH SYSTEM
NERVE RELATED DISEASES	VITAMIN UPTAKE	EVERY CELL IN THE BODY
COLDS AND FLU	MOOD	<b>OZONE BREAKS:</b>
ANGINA	BRAIN FUNCTION	DOWN CELLULITE
FEVER BLISTERS	MENTAL STABILITY	UP CHOLESTEROL
SHINGLES	TEMPERAMENT	
EPSTEIN BARR VIRUS	HEART FUNCTION	<b>OZONE RELEASES:</b>
ALLERGIES	MENTAL QUICKNESS	TENSION AND STRESS
CLUSTER AND TENSION HEADACHES		
SUDDEN HEART ATTACK	<b>OZONE ENERGIZES:</b>	<b>OZONE IS:</b>
TUMOURS AND CYSTS	ALL CELLS IN YOUR BODY	LIVER CLEANSER
ARTHRITIS		BUILDS AND TONES MUSCLES
CONSTIPATION	<b>OZONE FIGHTS:</b>	OVERCOMES BODILY WEAKNESS
GANGRENE	INFECTIONS	DECOMPOSES PLAQUE
ASTHMA, SINUSITIS & BRONCHITIS	HERPES	CLEANSES MUCUS
ALZHEIMER'S	EMPHYSEMA	HEIGHTENS ALERTNESS
GASTRO ENTIRITIS DISORDERS	LUNG DISORDERS	LIGHTENS THE HEART'S WORKLOAD
MULTIPLE SCLEROSIS	FIBROMYALGIA	DESTROYS HARMFUL MICRO ORGANISMS
STROKES	BRONCHIAL PROBLEMS	HELPS SUPPLEMENTS & MEDICATION
DEGENERATIVE DISEASES		INCREASES CELLULAR VITALITY
	<b>OZONE KILLS:</b>	IGNITES CARBOHYDRATES
<b>OZONE COMBATS:</b>	PARASITES (AMOEBAS & FUNGI)	DISPERSES HEAVY METAL TOXICITY
DEPRESSION, ANXIETY & DESPONDENCY	VIRUSES	STRENGTHENS IMMUNE SYSTEM
CHRONIC FATIGUE & TIREDNESS	CANDIDA	
	BACTERIA	<b>OZONE BOOSTS:</b>
<b>OZONE RELIEVES:</b>	WORMS	ENERGY LEVELS
MUSCLE ACHES & PAINS	BAD COLON BACTERIA	BLOOD BOOSTER
ATHRITIS (ALL)		
ANGINA		
<b>OZONE NEUTRALIZES &amp; ELIMINATES:</b>	<b>OZONE PURIFIES:</b>	<b>OZONE OXIDISES:</b>
CHRONIC HOSTILITY	SKIN (ACNE, ECZEMA, PSORIASIS, DRY SKIN)	POISONS IN THE BODY
ENVIRONMENTAL TOXICITY	BLOOD	MORBIFIC MATERIAL
ACID STOMACH	LYMPH SYSTEM	POLLUTION
LACTIC ACID		
	<b>OZONE SPEEDS UP:</b>	<b>OZONE CLEARS OUT:</b>
<b>OZONE CORRECTS:</b>	HEALING OF WOUNDS (BRUISES ETC.)	BRAIN FOG
DIZZINESS	ATHLETIC RECOVERY	DIRTY FLUIDS FROM THE BODY
FAULTY METABOLISM	RECOVERY RATE AFTER HOSPITALIZATION	
MEMORY LOSS	CHEMO AND RADIATION TREATMENT	<b>OZONE CALMS:</b>
BLOOD PRESSURE		NERVES
	<b>OZONE BURNS:</b>	TEMPERAMENT
<b>OZONE OXYGENATES:</b>	FAT	
PANCREAS	EXCESS SUGAR	
SPLEEN		
HAEMOGLOBIN		
LUNGS, HEART AND KIDNEYS		

<http://in5d.com/100-benefits-of-ozone-therapy/>

in5d.com

# Conclusions

- ▶ Ozone therapy is a highly controversial topic
- ▶ No statistics on public opinion
- ▶ What is known
  - ▶ Ozone is a powerful oxidant
  - ▶ OSHA regulates exposure to humans at the sub-ppm level
  - ▶ FDA has approved the treatment of produce with ozone

