

Authorities:

James Steward, MD, Director of Hygiene

E. S. Hallett, Chief Engineer, Board of Education, St. Louis

**Subject: OZONE - Indispensable in Schools**

During the influenza epidemic in St. Louis, the most critical and advanced cases were transferred to an open air school, which made for high percentage of mortality. In one particular ward, experiments were made with ozonized air on cases approaching or at the crises period of the diseases where patients were able to inhale at all, they WERE AT ONCE RELIEVED AND SUCCESSFULLY CARRIED OVER THE CRISIS.

Two schools were then used for an experiment, one with OZONIZED air and another with ordinary air. Both schools contained approximately the same number of rooms. The following cases of sickness were observed and tabulated:

<b>CONDITION</b>	<b>OZONIZED AIR</b>	<b>ORDINARY AIR</b>
Tonsillitis	13	57
Sore Throat	24	60
Colds	46	64
Headache	9	66
Stomach ache	0	25
Earache	1	15
Toothache	0	20
Indigestion	0	9
Fever	1	49
The Grippe	0	6
Pneumonia	0	4

Comparing the total days absent we find that in the school where OZONIZED air was used, the school children were absent, due to the foregoing cases of sickness, 475 school days, while in the school where ordinary air was circulated by means of the ventilating system, the school children were absent a total of 1,098 school days.

Thousands of lives would be saved every year if homes and schools were equipped with apparatus for the circulation of Ozone. Injected with the air of the building to the extent of one part of Ozone to one million parts of air, it effects approximately 100% purification. In five years that Ozone has been used in the Public Schools of St. Louis, TUBERCULOSIS CASES HAVE BEEN REDUCED 50%, ALSO OTHER DISEASES HAVE BEEN MATERIALLY REDUCED.

In "Report to National Warm Air, Heating and Ventilating Association"

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Authorities:

Dr. S. Pribluda. MD

Dr. T. A. Chamorro. MD, Hospital Salaberry, Buenos Aires, Argentine

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Authority: E. K. Rideal, Ph.D., MA, Past President Physical Chemistry University, Illinois

**Subject: OZONE - for Powerful Sterilization**

OZONE is a powerful germicidal as was first indicated by Frohlick. Its high germicidal activity is doubtless due to its oxidizing power, and as a dual agent of this character, it has been fairly extensively employed for the sterilization of public water supplies, for the treatment of wounds in hospitals, and for various purposes of sterilization and preservation in industries. Some sterilization is effected by ozonation of air, since a marked reduction is obtained in the bacterial count of the air which has actually passed through the ozonizer and subject to the ultraviolet radiation in the ozonizer is practically sterile, and a consequent improvement in the bacteria naturally expected, in fact obtained.

In "Personal Notes"

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Authority: Hans Kleinmann, MD, German Research Authority

**Subject: OZONE - Its action on Surface Cultures, Bact. coli - Bacilli Diphtheria, Staphylococcus and Streptococcus**

Action of Ozone on Bact. coli 2 hours after vaccination.

Spread: 0.3 ccm solution 1:50000 of a 24 hour bouillon culture upon Endo medium. Two hours air dried, ozonized without pressure.

Ozone Concentration mg./1 hr	Time of ozonation Minutes	Bact. count after 36 hrs. incubation	Mortification Percent colonies
174.3	0	Ca 2-3000	00
174.3	2	60	98
174.3	8	15	99.5

Action of Ozone on surface cultures of Diphtheria Bacilli four hours after vaccination.

0.5 solution 1-50000 of a 48 hour bouillon culture on serum plates. Two hours. Air dried after two hours. Ozonized.

Ozone	Time of	Bact. count	Mortification
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Concentration mg./1 hr	ozonation Minutes	after 36 hrs. incubation	Percent colonies
174.3	0	1126	00
174.3	2	0	98.1
174.3	8	0	100

Action of Ozone on Staphylococcus, Pyogens Aureus, four hours alter vaccination.

0.3 ccm solution 1010000 of a 24 hour bouillon culture spread on agar plates. Dry one hour. Ozonized after three hours.

Ozone Concentration mg./1 hr	Time of ozonation Minutes	Bact. count after 36 hrs. incubation	Mortification Percent colonies
174.3	0	840	98
174.3	2	0	100

In "Action of Ozone on Pathogenic Germs"

Action of Ozone on non-hemolytic streptococcus, four hours after vaccination.

0.5 ccm solution 1-10000 of a 48 hour bouillon culture of blood agar plates. Two hours. Dried after two hours of ozonation.

Ozone Concentration mg./1 hr	Time of ozonation Minutes	Bact. count after 36 hrs .incubation	Mortification Percent colonies
174.3	0	Ca 2000	0
174.3	2	Sterile	100

All these tables testify that Ozone, very quickly and energetically, acts deadly on germs, grown macroscopically and dried on a medium soil.

The first table shows a mortification of 98% and 99% of the bact. coli within two minutes and this confirms completely the results of Dr. Heise. It also gave evidence that the action of Ozone is very intense on the plates and grows six (6) hours after the vaccination.

The other plates, dysentery, streptococcus, staphylococcus, which commonly were ozonized after 3-4 hours after vaccination were absolute sterile alter two (2) minutes.

According to the results of these experiments as shown in these tables, the disinfectory germicidal action of Ozone must be considered as most excellent and superior to other methods.

In "Action of Ozone on Pathogenic Germs"