

# Effect of adding ozone sauna to local injections in low back pain treatment.

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ABSTRACT

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**PURPOSE**

To evaluate the effect of adding ozone sauna with local O<sub>3</sub> injection in low back treatment and comparing it to local O<sub>3</sub> injection alone.

**PATIENTS & METHODS**

This study was conducted on 70 patients suffering from chronic low back pain (< 6 month), (Age: 35-65 years.), (L1/L2 to L5/S1), and Pain Assessment depends on Pain Scale before treatment and after 2, 4, 6, 8, 10, 12 sessions.

Patients are divided randomly into 2 groups; group (A) is 20 patients 12 males and 8 females and group (B) is 50 patients 33 males and 17 females.

**Group (A):** received local O<sub>3</sub> injection (7-12 mcg./ml.) for 12 sessions twice weekly.

**Group (B):** received local O<sub>3</sub> injection as group (A) followed by OZONE SAUNA for 12 sessions twice weekly.

**RESULTS**

	Pain Scale							No. of PT.their pain scale become less than		
		10-9	8-7	6-5	4-3	2-1	0	(A) <60%	(B) <40%	(C) <20%
<b>GROUP A</b>	No.of sessions									
	0	4	16	-	-	-	-	-	-	-
	2	4	8	5	3	-	-	8=(40%)	3=(15%)	-
	4	4	6	4	4	-	-	8=(40%)	4=(20%)	-
	6	3	4	4	4	1	-	9=(45%)	5=(25%)	1=(5%)
	8	2	3	3	6	6	-	15=(75%)	12=(60%)	6=(30%)
	10	2	2	1	7	6	2	16=(80%)	15=(75%)	8=(40%)
12	2	1	2	4	8	3	17=(85%)	15=(75%)	11=(55%)	

Group B	Pain Scale	10-9	8-7	6-5	4-3	2-1	0	No. of PT. their pain scale become less than		
	No. of sessions							(A) ≤ 60 %	(B) ≤ 40 %	(C) ≤ 20 %
		0	18	32	==	==	==	==		
	2	10	11	8	12	6	3	29 = 58%	21 = 42%	9 = 18%
	4	10	3	3	9	19	6	37 = 74%	34 = 68%	25 = 50%
	6	7	3	4	7	21	8	40 = 80%	36 = 72%	29 = 58%
	8	5	3	6	3	24	9	42 = 84%	36 = 72%	33 = 66%
	10	3	3	2	2	27	13	44 = 88%	42 = 84%	40 = 80%
	12	2	2	1	1	28	16	46 = 92%	45 = 90%	44 = 88%

**DISCUSSION**

(A) Previous studies were done proving that treating chronic low back pain by antibiotics for long periods gives good results.

(B) Systemic effect of Ozone Sauna (its bactericidal effect) could be the reason standing behind the fast and sustained improvement of patients receiving it and local ozone injections (its anti-inflammatory effect) at the same time.

**CONCLUSION**

Adding Ozone Sauna to local O<sub>3</sub> injections in treating chronic low back pain resulted in fast improvement and better outcome (more patients) than using local O<sub>3</sub> injections alone.