# THE USE OF ENZYME POTENTIATED DESENSITIZATION (EPD) FOR THE TREATMENT OF MULTIPLE DISORDERS IN ENVIRONMENTAL MEDICINE: REPORT OF A COHORT STUDY

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**Goals and Objectives:** This paper will present the current available data on 639 patients o EPD immunotherapy from the U.S. IRB Study group.

**Introduction**

Enzyme Potentiated Desensitization (EPD) is a method of immunotherap developed by Dr. Leonard McEwen (London) in the mid 60's.[1-6] The method involve desensitization with a combination of very low dose allergens (generally mixed) with th enzyme, β-glucuronidase. The β-glucuronidase is thought to act as a lymphokine potentiating the immunizing effects of the allergens and acting directly on at least on variety of T-suppresser cell. This induces a longer lasting desensitization than does any typ of previously known immunotherapy, and necessitates injections only be given every 2 to 3 months, and later less often. EPD also appears useful in the treatment of a large variety o conditions not previously considered responsive to immunotherapy of any kind. EPD immunotherapy can be tapered and stopped over time. The average number of injections required appears to be between 16-18 before the injections can be discontinued or stopped for long periods.

This is a continuation of the non-blinded study of Enzyme Potentiated Desensitization first reported by this author in Oct., 1992, though my original 134 patients are not included in the group, as I have moved my practice and the original data has not been updated as yet. Thirty-eight separate disorders were investigated (now expanded to about 50 -- see the patient questionnaires included here) though these medical conditions will not all be discussed in detail. The study has now been expanded under the auspices of an IRB, and includes patients from several physicians.

The results and data prepared in time for submission for the syllabus which appears h may be different from that given at the time of presentation, as other physicians may sub data to be added to this study. This current study group covers the period from 3/20/9 7/29/94, a period of 3 years and 4 months. Some of the patients below were eliminated from data calculation, as follows:

| **STARTING NUMBER OF PATIENTS** | **639** | **100%** |
|---|---|---|
| 1) DROPPED OUT, <3 INJECTIONS | 55 | 8% |
| 2) DROPPED OUT, FAILURES --not eliminated | 26 | 4% |
| 3) SHOTS EXTENDED, DOING WELL - not eliminated | 0 | |
| 4) DROPPED OUT, FINANCES/OTHER | 12 | 2% |
| 5) DROPPED OUT, TOO DIFFICULT | 11 | 2% |
| 6) LOST CONTACT | 9 | 1% |
| 7) TRANSFERRED TO ANOTHER EPD PHYSICIAN (NOT COUNTED IN DROPOUT RATE) | (41) | |
| **TOTAL Dropouts :** | 113 | **17%** |
| **REMAINING PATIENTS** | **526** | |
| **No Response, or response non-interpretable** | **20** | |
| **PATIENTS COUNTED FOR STUDY RESULTS (Total minus #7, minus "No Response and plus #2 above)** | **491** | |

**Average ages of *total* patients in study, prior to elimination of any patients**

| SEX | # | % | AVE AGE |
|---|---|---|---|
| MALE | 202 | **32%** | 32.23 |
| FEMALE | 437 | **68%** | 42.77 |
| ANDROID | 0 | | |
| **TOTAL** | | | **39.49** |

**639 patients were initially included in the study. There were 202 males (Ave age: 32.23) and 437 females (Ave age: 42.77).**

The results of the data collected at the time of submission are as follows: 1) *patients transferred to another EPD MD are not counted in results*, 2) numbers and percentages of patients with diagnoses include all patients *active* in study only, 3) results of treatment for all diagnoses do not include dropouts, except dropouts who did poorly and had more than 3 injections, 4) therefore, dropouts in categories 1, 4, 5, 6 and 7 are not counted in the statistics to follow.

**Participating Physicians (listed alphabetically) were: Dr. Steven Edelson, Dr. Ken Gerdes, Dr. Richard Hrdlicka, Dr. W.A. Shrader, Jr., Dr. Bruce Stayton, Dr. Lawrence Webster, Dr. Randy Wilkinson and Dr. Rick Wilkinson. Physicians were all assigned numbers, and specific data is reported by number only.**

**Patients contributed:**

| Physician # | Beginning # of patients | Dropouts | Transferred | Remaining Patients | *General:* Excellent Very Good Good |
|---|---|---|---|---|---|
| 4 | 274 | 66 | 35 | 172 | **76%** |
| 6 | 233 | 30 | 0 | 203 | **71%** |
| 8 | 38 | 3 | 0 | 35 | **57%** |
| 9 | 39 | 5 | 6 | 28 | **53%** |
| 10 | 8 | 0 | 0 | 8 | **100%** |
| 11 | 26 | 0 | 0 | 26 | **53%** |
| 12 | 20 | 1 | 0 | 19 | **100%** |
| Total Patients ("No Response" patients deleted) | | | | 491 | |

NOTE: Values reported in percentage values are rounded to absolute numbers, and may not total exactly 100%

**AVERAGE NUMBER OF SHOTS GIVEN WAS 4.26 PER PATIENT**

***General* Results Reported by Number of Shots Given:**

| # Shots | # Patients | Excellent Very Good Good | % | Fair | % | Poor Terrible | % |
|---|---|---|---|---|---|---|---|
| 1 | 38 | 26 | 68% | 8 | 21% | 4 | 11% |
| 2 | 86 | 52 | 60% | 18 | 21% | 16 | 19% |
| 3 | 91 | 59 | 65% | 21 | 23% | 11 | 12% |
| 4 | 86 | 58 | 67% | 17 | 20% | 11 | 13% |
| 5 | 67 | 48 | 72% | 12 | 18% | 7 | 10% |
| 6 | 35 | 29 | 83% | 3 | 9% | 3 | 9% |
| 7 | 34 | 26 | 76% | 8 | 24% | | |
| 8 | 23 | 20 | 87% | 3 | 13% | | |
| 9 | 13 | 11 | 85% | 1 | 8% | 1 | 8% |
| 10 | 7 | 6 | 86% | 1 | 14% | | |
| 11 | 2 | 2 | 100% | | | | |
| 12 | 3 | 3 | 100% | | | | |
| 13 | 2 | 2 | 100% | | | | |
| 14 | 2 | 2 | 100% | | | | |

**Results for inhalants, patients' histories positive to inhalants, by number of shots given:**

| Shots | # | EVGG | % | Fair | % | P/T | % |
|---|---|---|---|---|---|---|---|
| 1 | 25 | 11 | 44% | 8 | 32% | 6 | 24% |
| 2 | 61 | 35 | 57% | 14 | 23% | 12 | 20% |
| 3 | 70 | 38 | 54% | 22 | 31% | 10 | 14% |
| 4 | 65 | 35 | 54% | 18 | 28% | 12 | 18% |
| 5 | 63 | 34 | 54% | 13 | 21% | 6 | 10% |
| 6 | 26 | 21 | 81% | 3 | 12% | 2 | 8% |
| 7 | 29 | 22 | 76% | 5 | 17% | 2 | 7% |
| 8 | 20 | 16 | 80% | 3 | 15% | 1 | 5% |
| 9 | 6 | 3 | 50% | 1 | 17% | 2 | 33% |
| 10 | 4 | 3 | 75% | | | 1 | 25% |
| 11 | 2 | 1 | 50% | 1 | 50% | | |
| 12 | 2 | 2 | 100% | | | | |
| 13 | 2 | 2 | 100% | | | | |
| 14 | 2 | 2 | 100% | | | | |

**Results for foods, patients' histories positive to foods, by number of shots given:**

| Shots | # | EVGG | % | Fair | % | P/T | % |
|---|---|---|---|---|---|---|---|
| 1 | 25 | 11 | 44% | 7 | 28% | 7 | 28% |
| 2 | 58 | 22 | 38% | 15 | 26% | 21 | 36% |
| 3 | 69 | 31 | 45% | 26 | 38% | 12 | 17% |
| 4 | 61 | 35 | 57% | 14 | 23% | 12 | 20% |
| 5 | 61 | 31 | 51% | 12 | 20% | 8 | 13% |
| 6 | 31 | 24 | 77% | 5 | 16% | 2 | 6% |
| 7 | 28 | 18 | 64% | 6 | 21% | 4 | 14% |
| 8 | 19 | 14 | 74% | 5 | 26% | | |
| 9 | 8 | 5 | 63% | 1 | 13% | 2 | 25% |
| 10 | 3 | 3 | 100% | | | | |
| 11 | 2 | 2 | 100% | | | | |
| 12 | 2 | 2 | 100% | | | | |
| 13 | 2 | 2 | 100% | | | | |
| 14 | none | | | | | | |

**Results for chemicals, patients' histories positive to chemicals, by number of shots given:**

| Shots | # | EVGG | % | Fair | % | P/T | % |
|---|---|---|---|---|---|---|---|
| 1 | 18 | 3 | 17% | 7 | 39% | 8 | 44% |
| 2 | 32 | 11 | 34% | 9 | 28% | 12 | 38% |
| 3 | 44 | 19 | 43% | 17 | 39% | 8 | 18% |
| 4 | 40 | 18 | 45% | 9 | 23% | 13 | 33% |
| 5 | 37 | 17 | 46% | 8 | 22% | 12 | 32% |
| 6 | 20 | 9 | 45% | 11 | 55% | | |
| 7 | 12 | 9 | 75% | 2 | 17% | 1 | 8% |
| 8 | 14 | 10 | 71% | 3 | 21% | 1 | 7% |
| 9 | 3 | 1 | 33% | 1 | 33% | 1 | 33% |
| 10 | 1 | 1 | 100% | | | | |
| 11 | 2 | | | 2 | 100% | | |
| 12 | 1 | 1 | 100% | | | | |
| 13 | 1 | | | 1 | 100% | | |
| 14 | none | | | | | | |

**Summary Table: General, Inhalants, Foods, Chemicals, by number of shots given:**

| # Shots | # Gen | # Inhal | # Food | # Chem | EVGG Gen% | EVGG Inh% | EVGG Food % | EVGG Chem % | FAIR Gen% | FAIR Inh% | FAIR Food % | FAIR Chem % | P/T Gen% | P/T Inh% | P/T Food % | P/T Chem % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 38 | 25 | 25 | 18 | 68% | 44% | 44% | 17% | 21% | 32% | 28% | 39% | 11% | 24% | 28% | 44% |
| 2 | 86 | 61 | 58 | 32 | 60% | 57% | 38% | 34% | 21% | 23% | 26% | 28% | 19% | 20% | 36% | 38% |
| 3 | 91 | 70 | 69 | 44 | 65% | 54% | 45% | 43% | 23% | 31% | 38% | 39% | 12% | 14% | 17% | 18% |
| 4 | 86 | 65 | 61 | 40 | 67% | 54% | 57% | 45% | 20% | 28% | 23% | 23% | 13% | 18% | 20% | 33% |
| 5 | 67 | 63 | 61 | 37 | 72% | 54% | 51% | 46% | 18% | 21% | 20% | 22% | 10% | 10% | 13% | 32% |
| 6 | 35 | 26 | 31 | 20 | 83% | 81% | 77% | 45% | 9% | 12% | 16% | 55% | 9% | 8% | 6% | |
| 7 | 34 | 29 | 28 | 12 | 76% | 76% | 64% | 75% | 24% | 17% | 21% | 17% | | 7% | 14% | 8% |
| 8 | 23 | 20 | 19 | 14 | 87% | 80% | 74% | 71% | 13% | 15% | 26% | 21% | | 5% | | 7% |
| 9 | 13 | 6 | 8 | 3 | 85% | 50% | 63% | 33% | 8% | 17% | 13% | 33% | 8% | 33% | 25% | 33% |
| 10 | 7 | 4 | 3 | 1 | 71% | 75% | 100 % | 100 % | 29% | | | | | 25% | | |
| 11 | 2 | 2 | 2 | 2 | 100 % | 50% | 100 % | | | 50% | | 100 % | | | | |
| 12 | 3 | 2 | 2 | 1 | 100 % | 100 % | 100 % | 100 % | | | | | | | | |
| 13 | 2 | 2 | 2 | 1 | 100 % | 100 % | 100 % | | | | | 100 % | | | | |
| 14 | 2 | 2 | | | 100 % | 100 % | | | | | | | | | | |

**KEY: EVGG = Excellent (>90%), Very Good (>75%) or Good (>50%)**

**FAIR = 25% better**

**P/T = Poor/Terrible (No better or worse than before shots begun)**

**Conclusion: There is now little question that EPD appears to be an effective treatment for most conditions we treat as Environmental Physicians, and likely more effective for a considerable number of conditions than other therapy available. The author believes this paper, though the data should still be considered preliminary, presents mounting evidence to support this position.**

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