
ENZYME POTENTIATED DESENSITISATION (EPD)

What is EPD? EPD is a treatment for allergic conditions. It is administered by a small injection to the skin of the forearm. It consists of an enzyme and a mixture of allergens.

What Enzyme? The enzyme is called β -glucuronidase. It is present in our bodies already. The amount given with each dose of EPD is equivalent to the amount we would expect to find in less than 4 ml of blood. This enzyme stimulates immune cells at the site of injection. The cells respond by 'carrying' the allergens from the injection site to the immune system 'headquarters', where they 'present' the allergens to the immune system. In effect they say: "These allergens are not a threat to health, do not react against them". The immune system responds by producing a new population of cells called T-suppressor cells. These 'police' the other cells in the immune system, and suppress allergic reactions.

Which Allergen Mixtures? There are a number of allergen mixtures to choose from. They include: commonly eaten foods, airborne allergens, chemicals, and a few 'odds and ends'. Each patient will receive the allergen mixture best suited to their needs.

What is EPD used for? EPD has been used successfully in the treatment of such varied allergic conditions as hay fever, asthma, perennial rhinitis, nasal polyps, urticaria and angioedema; as well as food-induced hyperactivity, migraine, irritable bowel syndrome, ulcerative colitis, eczema, and arthritis. It has also helped some patients with Chronic Fatigue Syndrome. EPD has not yet been developed for the treatment of contact allergic dermatitis, drug allergy, or insect sting allergy.

Is it Safe? The amount of allergen administered with each dose of EPD is never greater than the dose you would receive with a diagnostic skin prick test. For this reason, EPD is a much safer treatment than conventional desensitisation. The volume injected is 0.05 ml - it is a very small injection. Patients with a history of life-threatening allergic reactions will be offered an even greater degree of safety: an epidermal scrape. This consists of superficially scraping the skin with the edge of a blunted scalpel. A sterile plastic 'cup' is then taped over the scrape, and filled with the EPD treatment solution. The solution is allowed to percolate through the skin over 24 hours, and the cup is then removed. Some fluid may still be present, and a jelly-like substance may cover the scrape. This will dry within 30 minutes, and the scrape will heal normally over the next 10 days or so.

Is it effective? EPD has been shown by clinical trial to be effective in up to 80% of patients. In other words, 4 out of 5 patients, whose allergies have been properly identified, should enjoy some benefit from treatment.

How long will it be before I notice improvement? It takes about 21 days for the newly stimulated T-cells to mature. There will usually be no appreciable difference in your allergic symptoms until this time has elapsed. The response to the first dose of EPD is variable - most patients will experience some benefit, but some may not, and some may even feel worse. Patients with eczema, hyperactivity, and Chronic Fatigue

Dr. E. Joe Fitzgibbon.

Allergy Clinic, Suite 31 Galway Clinic, Doughiska, Galway, Ireland.

www.joefitzgibbon.ie; email: info@joefitzgibbon.ie; Tel: int +353 (0)91 720155

Syndrome are most likely to report a definite, albeit transient, worsening of symptoms after their first dose of EPD. Subsequent doses do not have this negative effect.

How many injections will I need? Simple allergies such as house dust mite will begin to improve after just 2 or 3 injections. Significant relief from hay fever may be obtained by just one or two injections given well before your hay fever season starts. Other conditions may not respond until 4 injections (or more) have been given. Injections are given at 8 week intervals until a good response is obtained. Then, depending on response, the injections are given at greater intervals. Once their symptoms are well controlled, most patients find that they can stop injections for very long periods. Relapses may occur after several years and these respond to booster doses.

Are there any side-effects? *Side-effects will be kept to a minimum by following instructions carefully!* It is quite normal for the injection site to swell immediately after injection. This will quickly subside. A delayed swelling may also occur after 3-6 hours and may persist for 3 days, but it should begin to subside by the 4th day. Rarely, the whole forearm may swell. These are not serious reactions. They should be treated with one of the older anti-histamine tablets, and not with the newer antihistamines, creams or ointments. Other side-effects include a transient worsening of the allergies being treated, such as sneezing, runny nose, 'nettle rash', etc. These will usually disappear within a few days, but may persist in some cases for a few weeks, and very rarely, for a few months.

How do I prepare for EPD? The 24 hours *either side of the injection*, are times of critical importance. Please obey the rules.....

Rule 1) Allergen avoidance

Avoid exposure to all potential allergens, even if you have never been bothered by them before: e.g., pollen, dust, mould, animals, tobacco smoke, chemicals, exhaust fumes, newspaper print, toothpaste, etc. Be especially careful to avoid the airborne allergens which you know upset you. Avoid cosmetics and toiletries: the day before, the day of, and the day after injection. Don't forget creams, soap, ointments, lotions, shampoo, deodorant, hair spray, scented products, makeup, etc. Patients with eczema may find these restrictions unbearable, please discuss with your allergist. Use Simple[®] Soap and Shampoo for 1 day before and 7 days after EPD.

Rule 2) For food allergic patients only:

Start the EPD diet 24 hours before EPD, and stay on it for a total of 48 hours:

Lamb, sweet potato, *cooked* carrots, *cooked* cabbage, *cooked* celery, lettuce, rhubarb, and fructose. Use Granose margarine (red box), and drink only bottled spring water. *Obviously, if you are allergic to any of these foods, avoid them!*

Rule 3) No alcohol from 3 days before until 7 days after EPD

Dr. E. Joe Fitzgibbon.

Allergy Clinic, Suite 31 Galway Clinic, Doughiska, Galway, Ireland.

www.joefitzgibbon.ie; email: info@joefitzgibbon.ie; Tel: int +353 (0)91 720155

Rule 4) Eat only safe foods for 21 days after EPD. Eating an ‘allergic’ food immediately after EPD could make you *more* allergic to it rather than less! For best results, wait until 3 weeks have elapsed before trying a culprit food. Eating it at this stage may still upset *you*, but it will not upset the *treatment*.

Rule 5) Avoid the dentist for 1 week before and 3 weeks after EPD.

Rule 6) Avoid animals for 24 hours before and after EPD. It may be necessary to move a pet from the family home for a few days either side of *each* EPD injection. There is a risk that you would become allergic to the animal if this precaution is not taken. If you own a dog, vacuum the hairs that it left behind; if you own a cat, ventilate the house well in order to disperse the cat allergen (which is airborne). Treat *all* cats for fleas (even if you think there are none!) *before* you start on a course of EPD - cat-induced asthma is caused, in some cases, by the cat flea! Weekly washing of the cat also helps to reduce the load of cat allergen.

Rule 7) Occupational hazards

If you handle chemicals, paint, polish, etc.; or if you are working in a dusty or mouldy environment, you may be at risk of becoming allergic to these. It may be necessary to take a few days off.

Rule 8) Chemicals *This is especially important for those who react to chemicals.*

From 12 hours before until 2 days after EPD **avoid**:

- newspapers, glossy magazines, or new books.
- aerosols, spray polishes, or perfume.
- paint, new plastic, new vinyl, etc.
- traffic fumes on your way to and from EPD injections.

Dr. E. Joe Fitzgibbon.

Allergy Clinic, Suite 31 Galway Clinic, Doughiska, Galway, Ireland.

www.joefitzgibbon.ie; email: info@joefitzgibbon.ie; Tel: int +353 (0) 91 720155

Rule 9) Avoid immunisation and anti-malarials as follows:

Anti-malarial drugs	from 10 days before, until 21 days after EPD
Hepatitis globulin	from 14 days before, until 14 days after EPD
Measles & Mumps	from 21 days before, until 7 days after EPD
Influenza	from 7 days before, until 7 days after EPD
Rubella	from 21 days before, until 7 days after EPD
Tetanus	from 7 days before, until 7 days after EPD
Poliomyelitis	from 21 days before, until 7 days after EPD
All TB tests	from 7 days before, until 7 days after EPD
BCG (TB)	from 60 days before, until 7 days after EPD
Typhoid	from 10 days before, until 14 days after EPD
Cholera	from 10 days before, until 14 days after EPD
Yellow fever	from 10 days before, until 14 days after EPD

Rule 10) Some prescribed medicines may interfere with EPD. For 1 week before and 3 weeks after EPD, avoid...

- *Antibiotics:* Sulphonamides, and trimethoprim should be avoided; penicillin and erythromycin are allowed.
- *Inhalers:* Asthma inhalers should be reduced for a few days if possible - but **always** treat asthma adequately - discuss with your allergist.
- *Pain-killers:* aspirin, paracetamol, and all 'non-steroidal anti-inflammatory drugs (NSAID's) will interfere. You may use codeine or Acupan as advised.
- *Essential fatty acids:* Cod liver oil, evening primrose oil, EPA marine lipid concentrate, GLA, etc.
- *Misc.:* Vitamin C, Tagamet, Zantac, cold cures.

Rule 11) Do not have EPD if you are pregnant

Rule 12) EPD is likely to be upset by...

- Acute infections at the time of EPD
- Acute emotional distress at the time of EPD
- Unaccustomed physical activity and sport within 5 days of EPD
- Extreme heat with dehydration: sauna's, sunbathing, etc. within 5 days of EPD

Rule 13) Miscellaneous

- Do not vacuum clean the house within three days either side of EPD
- Avoid feather bedding
- Keep your house mould-free at all times

Dr. E. Joe Fitzgibbon.

Allergy Clinic, Suite 31 Galway Clinic, Doughiska, Galway, Ireland.

www.joefitzgibbon.ie; email: info@joefitzgibbon.ie; Tel: int +353 (0) 91 720155

Rule 14) Silver Birch Allergy

Patients who are allergic to Silver Birch pollen must avoid the following foods for 1 day prior to, and 7 days following EPD:

- Nuts - all sorts,
- Pips, i.e. apples, oranges, etc.
- Carrots, celery and potato.

Rule 15) Nutritional supplements

Remember to **stop** your vitamin C, Evening Primrose oil, and EPA marine lipid concentrate, etc., 7 days before EPD; and to stay off them for 21 days after.

Remember also to take your Vitamin A, D3, and folic acid if directed.

Rule 16) You are kindly requested to stay in the Clinic for 30 minutes after each injection.

Your EPD record

	Date	Response		Date	Response
1st Dose			5th Dose		
2nd Dose			6th Dose		
3rd Dose			7th Dose		
4th Dose			8th Dose		

Dr. E. Joe Fitzgibbon.

Allergy Clinic, Suite 31 Galway Clinic, Doughiska, Galway, Ireland.

www.joefitzgibbon.ie; email: info@joefitzgibbon.ie; Tel: int +353 (0) 91 720155