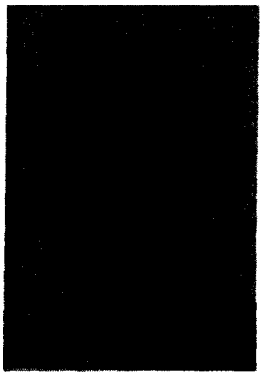
Central Nervous System Allergy



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It is my belief that all allergy involves the central nervous system. Today I will attempt to explain the reasons for my views and at the same time offer a method, of treatment that I consider relatively simple and very effective, the proof of these views being the success of my treatments.

In allergy we start with an allergen. This, in contact with our patient, causes one of a multitude of symptom complexes because of overreaction by the body to a relatively innocuous molecule. Why? Not only because of a local reaction to the allergen. Here I digress for a moment to tell of an experiment done by Dr. Joseph Bellanti, Professor of Pediatric Immunology at Washington, D.C., in which antigen and antibody were mixed together with amazing results. If the two were equal, then a clear solution resulted: use an excess of antibody, and a coarse precipitate occurred on each occasion. Use an excess of antigen, and a fine precipitate occurred on each occasion. Here we have the extent of the local reaction in most cases. A messenger has been formed and possibly in the blood stream goes to a receiving centre - where these receiving centres are I admit I do not know, but they could well be a specialized form of nerve ending. The message goes to the C.N.S. and then, and only then, does the reaction start. So we have three different types of messengers giving three different reactions.

1. Neutralization by equal quantities of antibody and antigen - the C.N.S. gives the all clear - no need for panic - no allergy attack.

2. Excess of antibody under certain circumstances- anaphylaxis and possible death, e.g., small test dose of penicillin given by injection in a sensitized patient.

3. Excess of antigen - shock in the form usually of an allergy attack but in certain circumstances clinical shock.

Because of the fact that the main source of any symptom is the C.N.S. the variety of symptom complexes is large, and most antigens can cause most symptoms.

Inhalation of house dust can cause asthma in some, allergic rhinitis in others - even allergic dermatitis and certainly headaches and other C.N.S. symptoms. This I wish to make very clear because, although I feel that foods are the commonest cause of these hidden allergies, those who neglect the inhalants fail to help many, and in most others the help is not maximal. When a classic allergist talks about injections of a multitude of unnecessary antigens, he is

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right in criticizing his fellow classicists, but this will not apply to you if you follow the titration system of allergy testing and neutralization technique of treatment because your tests are accurate and your positives meaningful. Not only this, but application of this method will confirm for you my views on the mechanism of allergy and of the difference between the immunization of the classic allergists and, in fact, of the allergists who merely use the Rinkel method of titration of allergies and the build up of antigen following this, and of the neutralization technique as developed by myself.

What are these differences? The immunization method starts with a low dose of antigen and, by gradual tolerated increases, hits the body harder and harder until a defense mechanism is built up and the body is able to cope - even if badly - with the allergen in life.

The neutralization technique on the other hand attempts to convince the body that all is well and that the allergen is not causing trouble. Here I go back to the laboratory experiment - when equal quantities of antigen and antibody come together, the all clear is sounded to the body and the patient has no symptoms, because without overreaction of the body's immune system the foreign protein is relatively harmless. I do not maintain that all the particular IgE or IgG in the body is neutralized, but what does happen is that a dose of 0.05 cc of antigen put into the skin intracutaneously has in it the same concentration per cc of antigen as the tissue fluids have per cc of the particular antibody. Thus the facing armies of molecules neutralize each other.

The two methods of treatment are, therefore, poles apart, the traditional method taking months and helping, if you are lucky, and of course only with the easiest of symptom complexes in patients with relatively few allergies, because obviously the tolerated top dose for each allergen may be vastly different.

However, with the neutralization process, your patient can be improved sometimes even in the office during testing; usually within one to two weeks and only exceptionally, with a combination of allergies such as asthma and allergic dermatitis, in one, two, or three months. Moreover, my patients, who almost never are sent in because of C.N.S. symptoms, to their amazement find many other complaints, headaches, migraine, bladder troubles, gall bladder troubles, etc., etc., clearing for the first time in many years. Many liken it to a cloud being lifted from them.

Fascinating is the effect of the allergy testing itself. The classic allergist says that a test can cause no troubles on scratch testing and uncontrollable symptoms on I.D. testing, referring, of course, to food and inhalant allergies -except for pollens. Again wrong on both counts. They don't believe their patients and, therefore, don't listen. Our patients, during testing, can on occasion vary from sleepiness and actual depression with crying to excitation, and as one mother put it we turned her little boy into a demon for several hours after testing and with an overdose - slight of course - of vaccine during treatment. However, we are able very quickly to neutralize these effects.

This type of testing is called by many Rinkel allergists provocative testing and stories related of this method can frighten off many physicians. I view any allergy test on a patient as a provocative test. The main provocation being looked for is a positive wheal on the skin at the site of the test. I also say that to produce much more than this deliberately is uncalled for.

So far I have made statements and made very few references. For those of you who doubt, I would now like to take time off to quote various authors:

1. Dr. Ridges in Liverpool, England, states that in Britain most schizophrenics can be helped by cutting out Canadian Durum wheat from their diet - she blames the gluten.

2. Dr. Feingold, talking at the American Medical Association meeting in New York last year, stated that

hyperactivity in children in California has risen to very nearly 40 percent in some areas, and this increase parallels the increase in sales of salicylate containing food additives.

3. Also at the A.M.A. meeting, Dr. Warren talks about allergic desensitization for infectious diseases, and in particular schistosomiasis.

4. U.S. Army Research at the Letterwan Army Institute of Research, Presidio of San Francisco, Col. Jones et al., say that cutaneous fungus immunization is now possible.

5. Dr. Polk at the University of Louisville Health Sciences Center claims that vaccination against Pseudomonas aeruginosa could down I.C.U. respiratory infections.

6. In Mexico a common foreign antigen has been discovered in nine different cancers - told by Dr. Caravojak to the Joint European Assembly on Cytology and Cancer Prevention.

Next a few definitions:

Cyclic food allergy - a term used to denote a type of food allergy that is not fixed — repeated ingestions tend towards increased allergy. Omission tends towards increase in tolerance. This is the commonest type of food allergy.

Cumulative Reaction - refers here to the effect of several ingestions of the food and the increased reaction produced.

Fixed Food Allergy - here the food allergy remains, and even one ingestion after a long period of omission causes reaction.

Masked food allergy - here is a food allergy that can be controlled by the patient partially or fully. This is in effect the patient's attempt to neutralize himself by repeated ingestions and is the "food addict" who has to eat or drink every few hours to remain even partially well.

Neutralizing dose - the dose of allergen that gives maximal relief to the patient.

Now to my method of testing and neutralization.

Requirements for testing patients, using this method

1. Vaccine concentrates of antigens to be tested 1 in 10 for all except pollens which are 1 in 20. These can be purchased from Hollister-Stier or any other manufacturer.
2. 5 cc vials containing 4 cc of phenolated saline. Several gross of these needed.
3. 5 cc vials containing 4 cc of 25 percent glycerine in phenolated saline. Several gross of these needed.
4. 100 cc vials phenolated saline.
5. Empty sterile capped 5 cc vials.
6. Trays - wooden or plastic, with rows of holes to fit the 5 cc vials - obtainable from Hollister-Stier.
7. Sodium chloride tablets 1 gram. Sodium bicarbonate powder. Phenol solution 0.8 gram/cc.
8. Tuberculin syringes and assortment of needles.
9. Minute minders to time the tests.

Cleansing Solutions

There are three cleansing solutions for the syringes: No. 1 Sodium chloride tablets -1 gram x 90. Sodium bicarbonate powder - $5^1/2$ tsp. Phenol solution 0.8 gram/cc - 45 cc. Distilled water to 1 imperial gallon. Yellow colouring.

No. 2 Alcohol. Violet colouring.

No. 3 Sodium chloride tablets 1 gram x 40. Phenol solution 0.8 gram/cc -20 cc. Distilled water to 1 imperial gallon. No colouring.

A syringe to be cleansed is rinsed three times with the No. 1 solution - fill syringe up to the halfway mark - empty into waste container and repeat twice more. Co next to the No. 2 solution and cleanse twice with this. Then to the No. 3 solution and cleanse twice with this also. The syringe is now antigenically clean and ready for sterilization.

Making up titration trays for testing

Nonglycerinated diluting fluids must be used for this process. Sterile, phenolated diluting fluid only is used. A 5 cc vial containing 4 cc phenolated saline is used.

To dilute from the concentrate -1 cc of concentrate is added to 4 cc of sterile diluting fluid in the 5 cc vial. This must be measured very accurately, using a tuberculin syringe. The syringe is emptied and filled three times to insure mixing of the solution in the vial and to make certain that all vaccine in the syringe is mixed in. This gives us our No. 1 bottle.

To make No. 2 - a similar procedure is followed. One cc of the No. 1 solution is put into the next bottle which becomes No. 2. The No. 3 and etc. are similarly made. Serial dilutions up to No. 8 should be made routinely until by experience one sorts out the length of titration for each antigen. Practices vary considerably.

Pointers

1. All bottles should be labeled and in order on trays before the process is started. As each bottle is dealt with, it is moved immediately to another tray to show that the process is complete.
2. All bottles should have date of manufacture on the label - month then year.
3. When this process is being carried out, all bottle tops must be swabbed with alcohol before the needle is inserted.
4. Pollen solutions below the No. 2 dilution last only two to three weeks even when in the fridge between testing.
5. All solutions other than pollens can last for several months under normal office usage. (Out of fridge for testing, in the fridge the rest of the time.)
6. All solutions are in 1 in 5 dilution.

Concentrate	-1 in 10	(apart from
No. 1	-1 in 50	pollens
No. 2	-1 in 250	which start
No. 3	-1 in 1250	at 1 in 20
No. 4	-1 in 6250	
No. 5	-1 in 31,250	
No. 6	-1 in 156,250	
No. 7	-1 in 781,250	
No. 8	-1 in 3,906,250etc.	

Making up of titration bottles for treatment trays

Glycerinated solutions must be used here, the reason being that these solutions are more stable. 5 cc vials with 4 cc 25 percent glycerine are used. One cc of concentrate is added to the 4 cc of glycerinated solution in the vial, and this becomes the No. 1 solution. The process is repeated and dilutions up to No. 4 are made.

If glycerinated solutions are used for testing, a false positive results with every test.

Testing

Every patient before testing begins must be asked about known allergies and especially about violent reactions to foods and to animal contacts.

If there is a history of these violent reactions:

1. No food test should be undertaken unless the patient has been exposed to the food at least twice in the previous 48 hours.
2. Testing for both foods and animals must start at a low dilution, e.g., No. 9 solution.

Assuming no history of violent reactions, the testing on a new patient is started with intracutaneous injections of 1/100 cc of alternaria, T.M.E., and house dust from the No. 4 bottles, plus a control test with 1/100 cc of the sterile phenolated diluting fluid - we mustn't miss a phenol reaction.

1/100 cc of each vaccine is drawn up into the syringe. The syringes are left in the bottles which are in the tray. The injections are then given. In this way, the time interval between the first injection and the last injection is minimized.

These tests, and in fact all tests, must be given as superficially as possible. If given correctly, the wheal will have a sharp edge when given and is blanched.

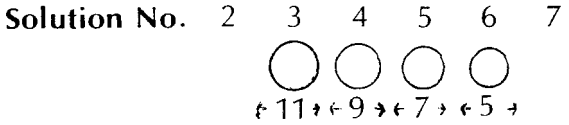
If given too deeply, the wheal will not blanch and will have no sharp edge.

The wheal should be about 4 mm diameter. The quantity of vaccine injected is not vital. The size of the wheal is more important. Attempts should be made to make all initial wheals the same size.

After 10 minutes, the tests are read.

The negative wheal will have grown to 5 mm in size, no more, and will have lost its sharp edge. Erythema can occur with both positive and negative wheals and is usually of no significance unless appearing only with positive wheals, in which case a doubtful wheal with erythema can be counted as positive.

If a positive wheal 6 or 7 mm diameter occurs with a No. 4 dilution, then we can assume that the No. 5 dilution will give a negative wheal. The test is done with a No. 5 to confirm this. Our rule is very simple. For each rise in concentration of an antigen, a positive wheal will increase in size by 2 mm in diameter in most patients. So if we give a test with a No. 3 solution after a wheal of 9 mm, with a No. 4, we would produce an 11 mm wheal.



If the "lead" tests are all negative, then the next series of tests is a complete mould one on the arm using No. 2 solutions.

The tests are put on as shown in the sketch; after 10 minutes the row of tests are read as before.

Tests over 6 mm with a bound wheal are positive, and a No. 3 dilution is applied to give a first negative. If the wheal is over 8 mm in a test in which the No. 4 dilution has not been applied, this is applied as well at the same time, i.e., three and four dilutions applied together. Those negative on No. 2 are taken, at this point, to show no allergy to the antigen. This view may be changed later.

If the "lead" tests are positive, then they should first be followed down to negatives.

Suppose they give negatives on No. 6, then we start all other tests on No. 5. These can then be taken up or down as necessary to produce a positive-negative row or a negative on No. 2 solution.

If negatives were only obtained on the "lead" tests on No. 8 solutions, then we would start the rest at No. 7, and so on.

When we go down to dilutions of this degree and on the first test of an antigen get a negative, we can safely do the next two injections in the series, e.g., if No. 7 is negative, next put on 6 and 5; if these are negative, 4 and 3. No. 2 would be applied if 4 and 3 were negative.

The next day the foods are tested. If there has been no history of violent reactions to any food and if all the foods to be tested are eaten regularly, these can be tested on the No. 2 dilution. In cases of violent reaction to foods, the offending foods should not be tested for unless the patient has eaten a small quantity at least twice in the 48 hours preceding the test, and should be started at a No. 9 level, working up to the first positive.

Mould and dust allergies must be checked 24 and 48 hours after testing. Delayed result wheals are not sharp-edged ones, but must still be measured and the maximum size of the raised area counted as the actual reaction size. Surrounding erythema is not counted. Foods may occasionally show delayed results - usually yeast and mushroom - for obvious reasons.

Testing with 5/100 cc can now start, and each test is started at the same level as the smallest positive test using 1/100 cc. It is vital that all these tests are taken down to a first negative before a patient leaves the office. The tests should never go down below the first negative, e.g., if a No. 2 milk gives a positive wheal and No. 3 is applied and is negative, the test is finished.

Technique is somewhat different. The test is applied, the wheal is measured immediately both across and down.

The measurements are put on to the charts, e.g., 7/7. After 10 minutes the wheal is again measured. A negative wheal has usually had no growth and its edges have flattened. A positive has grown and its edges are sharp. So we get on our chart

7/7 7/7	***7/7* 8/8**
negative	positive
7/6 7/6	7/6 8/7
negative	positive

Any allergen negative on a test with 1/100 cc No. 2 can be tested with 5/100 cc No. 2. A negative here is reasonably conclusive evidence of no allergy. A positive test must be taken down.

Abnormal whealing responses can occur. If the pattern does not seem to follow the normal 2 mm increase, testing should be stopped for that day for that antigen. The next day, if the abnormality persists, the end point is accepted.

If the rules for testing as outlined above are not followed, serious systemic symptoms may develop. The tests are very safe if the rules are followed. They can be extremely dangerous if the rules are not followed.

Mild reactions include - tiredness, depression with weeping, or excitability, headaches can be produced, some sweating. More than this, and testing should stop and a beginner in this technique should have adrenaline handy.

Abnormal whealing responses:

The commonest "abnormal" response is instead of a 5 - 7 - 9 progression using 1/100 cc we get 5 - 6 - 8 - 10. The 6 must be counted as the 1st positive if bound.

Plateau Reactions:

E.g., 5 - 7 - 7 - 7 - 9 - 11 or 5-7-9-9-11 - 13 - 15.

This type of reaction shows the danger of acceptance of a single test and calculating back so guessing at a neutralizing point.

Hourglass reactions:

Here we get increasing reaction with larger and smaller doses, e.g., vaccine

No.	2	3	4	5	6	7	8	9	11
		9	7	7	7	9	11	13	
or		11	9	7	5	7	9	11	13
or even	11	9	9	9	11	13			

Again this type of reaction shows the vital necessity of a clear-cut end point worked out by the series of tests.

Vaccines for treatment

Normal routine in my office is for a 50-dose bottle to be made.

0.1 cc of the antigen solution, two bottles above the neutralizing level, is put into the treatment bottle - this being a 5 cc empty sterile bottle, e.g., milk -positive wheal No. 2, negative wheal No. 3.

0.1 cc No. 1 milk solution used.

House Dust - positive wheal No. 4, negative wheal No. 5.

0.1 cc No. 3 house dust solution used.

Exceptions to this rule - If farm dust and/or grain dust are to be put in with house dust, then the quantity of each is reduced to 0.05 cc of the solution, e.g., house dust positive wheal No. 4, negative wheal No. 5. 0.05 cc No. 3 house dust solution used. Farm dust positive wheal No. 3, negative wheal No. 4. 0.05 cc No. 2 farm dust solution used. If three dust solutions are added, the quantity is kept at 0.05 cc of each.

If food and moulds, etc., are small in number, they can be put into the same treatment bottle. Otherwise, the foods are kept separate.

When all the antigen solutions have been put into the treatment bottle, the quantity of vaccine is made up to 2.5 cc total volume, so if 10 antigens have been added giving a total volume of antigen of 10 x 0.1 cc, i.e., 1.0 cc, then 1.5 cc of diluent would be added. The diluent is the sterile phenolated, diluting fluid - **nonglycerinated.**

Our glycerine content of the prepared vaccine has thus been taken down to about 10 percent. The vaccine if kept in a fridge will retain its potency for at least one year. Moreover, at this level of glycerine, it is possible to inject intracutaneously without too much local reaction.

The prepared vaccine should not be injected in maximum dose on the first injection.

The first test dose of vaccine is 0.02 cc intracutaneously. If there is no adverse reaction within 48 hours, the maximum dose can be given after three days - 0.05

cc intracutaneously.

If more than one bottle of vaccine is being used, ideally they should be given on test doses three days apart. In my office we give both together and only split if there are any adverse reactions.

Adverse reactions can occur because:

1. There may be potentiation of the allergens when put together in a vaccine.
2. The first negative wheal in some cases is said not to be the neutralizing dose - this from offices where the delayed reactions are not checked. Probably No. 1 accounts for most, if not all, of the adverse reactions.

The adverse reactions are usually at the 48-hour point after the injection and can take many forms. Increase in itch, increase in rash, tiredness, headaches - in fact, any symptom repeated on a second similar dose must be accepted.

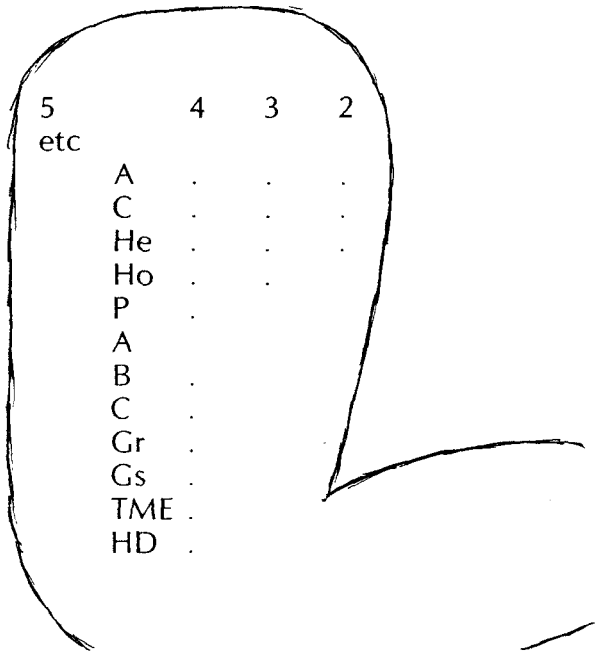
If a reaction occurs with 0.02 cc, the next injection should be 0.01 cc intracutaneously. If this is not the optimal dose and a reaction still occurs -less, of course, than with 0.02 cc, then the vaccine should be diluted. A 5 cc bottle with 2 cc sterile phenolated diluting fluid is used. 0.5 cc of the vaccine is put into this, and 0.02 cc of this mixture is injected.

If this reacts, then the possibility of missed glycerine or phenol sensitivity must be considered.

When the optimal dose is found, this is repeated upon demand by the patient. The patient quickly learns the prodromal signs of diminishing protection. One rule, however, is followed in my office: even if the patient remains well, the interval between injections should not exceed 4 weeks.

If, after a while, the vaccine does not seem to be working as well as previously, then the neutralization levels may have changed. If changing the dose is not possible, then retests must be undertaken and a new vaccine prepared.

This is a brief outline of the method used. I feel strongly that, before setting up and attempting this type of work, a physician should attend at an office where this or similar methods are in use.



Tests must be positioned on the arm as shown in this diagram. The letters are placed just left of the midline and solutions No.'s 4, 3 and 2 are to the right. Higher numbers are to the left. The frequently used 4, 3 and 2 must be put on as vertically as is possible.

All lettering of antigens must follow the rules of nomenclature as in the list.

The arm shown is the right arm. For the left arm, a similar procedure is used, the letters placed to the right of the midline.

LIST OF STANDARD ABBREVIATIONS THAT MUST BE USED ON ARMS WHEN TESTING

Alternaria	A.
Cephalosporium	C.
Helminthosporium	He.
Hormodendrum	Ho.
Pullularia	P.
Mould Mix A	A.
Mould Mix B	B.
Mould Mix C	C.
Grass Smuts	Gs.
Grain Smuts	Gn.
T.M.E.	T.M.E.
Silk Moth	S.M.
House Dust	H.D.
Farm Dusts	F.D.
Grain Mill Dusts	G.D.
Sheep Wool	S.W.

Feathers	F.	Potato	Pt.
Tobacco	Tob.	Celery	Cy.
Ethanol	Eth.	Lettuce	Le.
Phenol	Ph.	Orange	Or.
Bacteria	Ba.	Beef	Bf.
Histamine	Hi.	Pork	Pk.
Tobacco Smoke	T.S.	Chicken	Ck.
Glycerine	C.	Turkey	Tk.
Cat	Ct.	Onion	On.
Cattle	Ctl.	Garlic	Gr.
Dog	Dg.	Mixed Spices	Sp.
Horse	Hs.	Gin	Gn.
Human Dander	Hu.D.	Rum	Rm.
Pig	Pg-	Rye Whiskey	R.W.
Rabbit	Rb.	Scotch	St.
Jute	J.	Vodka	V.
Kapok	Kp.	Cheese	Ce.
Acacia Gum	A.C.	Monosodium Glutamate	M.S.G.
KarayaGum	K.G.		
Tragacanth Gum	T.C.		
Kleenex	Kl.		
Newsprint	Ne.		
Chalk Dust	CD.		
Orris Root	OR.		
Household Insect mix	H.I.		
Stinging Insect mix	S.I.		
Mosquito	Mo.		
Barley	Br.		
Corn	Co.		
Hops	Hp.		
Oats	Ot.		
Rye	Ry.		
Wheat	Wt.		
Milk	Ml.		
Egg	Eg.		
Chocolate	Ch.		
Coffee	Cf.		
Tea	Te.		
Malt	Mt.		
Yeast Bakers	Y.K.		
Yeast Brewers	Y.R.		
Soybean	Sy.		
Cotton Seed	C.S.		
Flax Seed	F.S.		
Rape Seed	R.S.		
Sugar Beet	S.B.		
Sugar Cane	S.C.		
Mushroom	Mu.		
Coconut	Ct.		
Grape	Gr.		
Juniper	Ju.		
Tomato	T.		

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