Relatively Speaking: Family Tree Way to Better Health: Orthomolecular Genetics

Christopher M. Reading, B.Sc, Dip. Ag. Se, M.B., B.S., M.R.A.N.Z.C.P.[1]

Introduction

Genetics has become an essential part of the medical and psychiatric work up. Thus with renewed world wide interest in "Orthomolecular Medicine/Psychiatry", "Nutritional Medicine", "Clinical Nutrition", "Applied Nutrition" and "Clinical Ecology" then as a natural sequence, "Orthomolecular Genetics" will become increasingly important. I define Orthomolecular Genetics as the identification and recording for future generations of the genetic, metabolic, hormonal, allergic/immunological and toxic disturbances that are running in families, contributing to, perpetuating, exacerbating and causing medical/psychiatric symptoms/signs allowing for their correction. Orthomolecular Genetics, I believe, will come to help each and every one of us. We are not able to choose our parents, but do have the choice to do the best we can with what we have inherited to reach our full potential.

My work is based on over 5,000 case studies to illustrate the importance of drawing up a medical or Orthomolecular family tree, and stresses the importance of genetics and what our family tree is clearly telling us about our future, allowing us to take practical steps to prevent serious illness from developing, or treat illnesses present or starting to appear. It is important to study the various ways certain genetic disorders are inherited, so we understand how autosomal dominant conditions are inherited, as well as X-linked and recessive conditions. Thus, once the genetic transmission of an illness is established, it is usually possible to know exactly who is at risk for the illness and who should definitely escape it. So often I hear and know of patients who have worried needlessly for years about the risk of certain illnesses, and often have not married for that reason, and if married have feared to have children, when a detailed medical family tree would have allayed their fears once and for all.

I see this often in X-linked conditions, where a son is very worried about a serious illness in his father, but cannot inherit that condition from his father because he can't get his X chromosome from his father. He gets it from his mother and the Y chromosome from his father, making him male. Similarly, a man with a serious X-linked illness, such as manic depressive illness, certain neurological disorders, some psychoses, even familial cancer, etc. can not pass on that X chromosome bearing that genetic disorder to any of his sons, but all the daughters are at risk, depending on whether the condition is X-linked dominant where the daughter usually shows the condition later, or X-linked recessive, where she is a carrier.

However, comforting as it is to know what one is *not* at risk for, what if one *is* at risk, or in the firing line for a serious condition because the genetic transmission is now known in your family or if one has the illness already?

This is one of the main purposes of my research, and of relevance, I believe, to us all.

If you, or those you are concerned about, are in that situation, whatever the illness, be the cause unknown or the treatment unknown and unlikely to be known at this stage, Orthomolecular genetics and a detailed medical family tree may help solve the problem.

The following things ideally should be included: Ages where known, age at time

[1] Pacific Medical Center, 8 Pacific Parade, Dee Why, NSW 2099, Australia.

of death and cause where known, medical conditions, especially cancer (and type where known), diabetes, hypertension/high blood pressure, strokes, thromboses, heart attacks, arthritis (osteoarthritis, rheumatoid arthritis, SLE, gout, etc.), pernicious anaemia, thyroid disorder and other medical conditions. Phenotypes or description of the person are important to record, including hair and eye colouring, complexion (fair or olive), whether tall or thin or short or fat. It is important to record if colour blind and those affected and what sort — blue/green or red/green, etc. Certain conditions can be linked with colour blindness in certain families such as severe depressive illness, psychoses, familial cancer and pernicious anaemia.

Where the medical condition is not known, then it is important to describe the patient or relative and list the main symptoms and signs. Once this has been done, the alert family doctor or specialist will know at a glance what the medical condition is called, especially those trained in Orthomolecular medicine, psychiatry and clinical nutrition.

For example, if you had an aunt who was depressed, became very forgetful, was overweight, sluggish, had coarse facial features, was going deaf, losing her hair, developing wrist pains, had a sallow complexion, then the medical condition would most likely be an underactive thyroid which responds extremely well to treatment.

Or suppose grandmother, much of her life, had migraine, arthritis, mouth ulcers, cold sores, hair loss, recurrent infections, was allergic to penicillin/sulphonamides, burnt easily in the sun, i.e. was photosensitive and suffered from severe depression, lassitude, or appeared psychotic or schizophrenic and later had dementia or a stroke or heart attack or even cancer, then it is highly likely she had undetected SLE for many years. Another example would be if the mother with a broad forehead, blue eyes, fair complexion, fair hair and premature greying, with white spots on the forearm (vitiligo) and sallow complexion, later appeared depressed or psychotic or confused, then pernicious anaemia (low B12) would immediately spring to mind
and if she had a deep midline fissured tongue, then pellagra/low B3 as well.

Another medical condition extremely common and unnamed in the family tree so often, is coeliac disease and if the bowel biopsy is normal and it commonly is, then it is called wheat/grain (gluten, Alpha gliadin) sensitivity/intolerance. Gluten and Alpha gliadin are very toxic fractions of most grains except rice. Here the relative has auburn or golden hair, pale freckled face or black hair that goes steel grey early, or a middle aged person who has white hair early, especially if osteoarthritis is associated, bowel upsets/wind and many physical problems with risk for psychosis and/or depression and later fissured tongue and picture of Alzheimer's disease or presenile dementia.

However, early greying is also seen in pernicious anaemia, SLE, and many other conditions, as well as coeliac disease. Vitamin C and folic acid, as well as B group vitamins, help prevent it. Early greying is usually associated with vitamin, mineral and certain amino acid deficiencies.

For instance, eight years ago, while off vitamins and minerals for three weeks while overseas, I was rapidly going grey above the ears; however, this readily reversed when back on supplements.

The next things to include on the family tree to help prevent, predict, diagnose and treat serious illnesses are the following: congenital abnormalities, chromosomal abnormalities and certainly major psychiatric illnesses such as schizophrenia/psychoses, manic depressive illness, chronic lassitude, weakness, dementia, severe anxiety states, including obsessional/phobic conditions and learning/behavioural/ sleep and other disorders in children.

Not generally known is the relationship between Alzheimer's disease (presenile dementia where people as early as 40's and 50's become confused and suffer severe memory impairment and usually have to be constantly supervised for the rest of their lives), Down's Syndrome, lymphoma or bowel cancers and leukaemia, and all these can occur in one family often with schizophrenia, an additional disorder not mentioned in the literature.

Down's Syndrome patients also have a high risk of leukaemia and virtually all

go on to a picture similar to Alzheimer's disease.

From my research, all these conditions stem from coeliac disease or wheat/grain allergies with severe malabsorption for vitamins, minerals, amino acids, etc. and also associated with a build up of toxic metals such as aluminium in the brain.

Thus, in my experience, Alzheimer's disease patients tend to have missed low Bl, B3, B12, folate and zinc, toxic levels of Al, Cd, Pb, etc. are gluten, Alpha glia-din sensitive, have missed SLE, and tend to have low amino acid tryptophan and other amino acids and most could do with more thyroxine (thyroid hormone). They also are allergic to milk fractions, as well as grain fractions and have other food allergies.

Thus, the clinician trained in applied nutrition, Orthomolecular psychiatry (see definition in Journal of Orthomolecular Psychiatry, Vol. 10, No. 1; 1981, p.29) will look at the ill patient and the family tree and be almost certain what the patient has inherited, where it has come from, and who is also at risk for it and what to do about it in terms of special tests and investigations. However, to further help in the diagnosis, treatment, prediction and prevention of illnesses in the family, I encourage an additional genetic approach and here again the family tree can give valuable answers or clues to which investigation must be done.

The next step, then, is to record food allergies/intolerances/hyper-sensitivities and allergies to drugs or chemicals. Hereditary food allergies cause most of the major illnesses known to mankind, because once allergic to wheat/grains, cow's milk, soyabeans/legumes, etc., they severely damage the digestive system and result in malabsorption of essential vitamins and minerals and amino acids, resulting in serious conditions such as pernicious anaemia due to low B12, and pellagra due to low B3. This is a very serious condition indeed, and endemic in the Australian population, and not being detected because B3 is not measured except by one or two laboratories. Other very common vitamin deficiencies are B6, Bl, Vitamin E, A, folic acid and less often B2, B5, and biotin.

In the last 4,000 patients I have assayed, mineral and vitamin deficiencies are extremely common, despite what dietitians call a well balanced or healthy diet and despite supplements; and often supplements many times the RDA are not enough to maintain normal blood levels. As far as B3 is concerned, I have seen patients maintained on 850mg/day, another on l,000mg/day and the record in my practice is l,150mg/day of B3 and yet this patient still had a low B3 level in the blood and one schizophrenic on over 3gram/day was borderline low when assayed. With B6, one patient was on l,600mg/day and still low in B6 — that is rare and very few patients need more than between 50 - 750 mg of B6 to have a normal blood level. One patient on 1,000 Vitamin E/day was still low when measured. I have seen a cancer patient receiving 40gram/day of Vitamin C with borderline low Vitamin C when tested next day. With Bl, some patients are low despite 400 - 500mg/day and even fat soluble Vitamin A can be low in some patients maintained on over 20,000 IU/day. All these patients had severe food allergies, like virtually most patients with serious illnesses.

We are definitely not *what we eat,* but *what we are able to absorb and utilize* and nowadays the old adage dating to Roman times, *one man's meat is another man's poison* takes on a new significance when we consider that it means food allergies/ malabsorption for essential vitamins, minerals and amino acids/damage to vulnerable tissues/organs and vessels/suppressed immune system/autoimmune disease/increased infections/cancer risk, etc.

The RDA is highly misleading, outdated and a gross underestimate, to the detriment of patients suffering from Down's Syndrome, SLE, schizophrenia, MS, depressive illnesses, anxiety states, dementia, osteoarthritis and other serious connective tissue disorders and chronic degenerative states and cancer.

The RDA's for pathological states have never been recorded and the RDA is for a normal/average person, whatever that means.

Thus the *final* thing to record on the family tree, after food allergies and their

effects, is evidence of *hereditary vitamin! mineral deficiencies* usually associated with the *hereditary food allergies* just mentioned.

Here it is important to record premature greying or date when greying became noticeable, where known. Also such signs as cracked lips, especially at the corner of the mouth, suggesting not enough B2 ± Vitamin A ±zinc and such things as a shiny red tongue of iron and B12 deficiency. Such small signs as white dots in nails are often associated with not enough B6 and zinc, and with Kryptopyrrole in the urine locking away B6 and zinc, a condition called pyrolleuria, well described by Dr. Carl Pfeiffer and Donald McCabe. Schi-zoaffectives are very much at risk for it. A schizoaffective is a schizophrenic with marked tendency to depression or an atypical manic depressive where the patient appears schizophrenic at times, usually treated with both tranquillizers and antidepressants until the real cause such as pyrolleuria, ± SLE ± pellagra ± coeliac disease ± pernicious anaemia with low folate, Bl, B6, zinc etc. and food allergies, Hypoglycaemia, etc. is diagnosed and corrected. When this happens, medication may not be required at all, or very much less — reducing risks of tardive dyskinesia, etc. Thus, finally, I would like to stress, Orthomolecular genetics is definitely to help with *prevention* of such serious illnesses as cancer, dementia, Down's Syndrome and hopefully chromosomal changes in dividing cells that would make them cancerous, for preventing heart attacks, thrombosis strokes, schizophrenia/psychoses, depressive illness, chronic lassitude/weakness, arthritic conditions and a host of other conditions so commonly running in most families.

Recording details of nutritional/allergic disturbances on family trees will open up new avenues of research, and hopefully, cures, eventually for hitherto idiopathic illnesses, that is illnesses where they neither know the cause of the illness or worse still, how to treat it.

In my experience, especially over the last four years, I would like to suggest the following conditions and variations/combinations of them, are causing most familial conditions including cancer, arthritis, psychiatric illness, especially those affecting the brain and blood vessels. They are as follows:

1. Collagen/connective tissue disorders such as SLE from early forms requiring special tests and skin biopsy (immunofluorescence) technique on unexposed skin, to diagnose, through to severe SLE presenting as frank dementia, psychosis, paralysis, stroke or severe depressive illness with an M.E. like picture.
2. Severe food allergies to wheat/grains and such fractions of gluten and Alpha gliadin.
3. Severe food allergies to cow's milk, including such fractions as Alpha casein, Alpha lactalbumin, Beta lactoglobulin and associated with allergies to albumin and globulin fractions of eggs and beef.
4. Pyroluria or Kryptopyrrole in the urine locking away B6 and zinc, and a precursor of coproporphyrin raised in acute intermittent porphyria, which can cause severe psychosis and neurological symptoms as in King George III and his relatives. Pyroluria, you will recall, is associated with white dots in nails and also tendency to china doll complexion, headaches, poor dream recall, severe inner tension, depression, and schizophrenic symptoms, if severe. It is also associated with allergies to milk ± eggs ± beef ± yeast and commonly associated with collagen connective tissue disorder and low IgA immunoglobulins.
5. Undiagnosed pellagra — low B3 in fissured tongue, etc. I have detected over 155 cases, now.
6. Other food allergies, together with allergies to milk/grains and especially soyabeans/legumes, resulting in severe malabsorption for essential vitamins and minerals and raised levels of Cd, Al, Hg, Pb, in vulnerable tissue such as the brain. Also food allergies are associated with lack of certain digestive enzymes and low amino acids especially in coeliac disease, etc.
7. Gastritis (or inflammation of the stomach cells) ± thyroiditis (inflammation of the thyroid gland) ± pernicious anaemia with parietal cell

antibodies and intrinsic factor antibodies.

8. Hypoglycaemia tendency, tendency to low Cortisol, and to have raised levels of certain antibody groups or types of Gamma globulin associated with food allergies, especially IgM or low IgA.
9. Anaemia — due to low B6 or Bl, B3, B12, folate, E or copper, rather than iron in many cases.
10. Low complements or raised complements, which are like antibodies, depending what conditions are in the family and are usually low in milk/ grain allergies and SLE, etc.
11. Antibodies to various tissues and organs, evidence of allergy to fractions of milk/grains.
12. In arthritic conditions — cartilage antibodies appear in osteoarthritis, particularly due to milk/grain fraction damage and synovial membrane antibodies appear in rheumatoid arthritis and Paget's disease, mainly due, I believe, to fractions of the deadly nightshade family/solanaceae such as tomatoes, egg plants, capsicums, peppers and even potatoes. Citrus can also be a culprit.

In the condition motor neurone disease or amyotrophic lateral sclerosis (ALS) where the patient can lose the ability to talk and swallow (like David Niven, the actor) the last four patients I have seen have all had low B3/pellagra which can cause inability to talk and swallow and paralysis also. Thus any patient with low B3 for long enough, could be a candidate for ALS, it seems, as well as dementia later — 2 out of 4 children at risk for ALS already had low B3 in one family.

To identify the conditions (1) to (12) listed, I know of no laboratory that can do all the tests and I am very fortunate in Australia to have two laboratories that between them do all these special tests if required.

Thus ideally, the most useful tests to help most patients with serious medical/psychiatric illness, arthritis, blood vessel disorders, etc. are as follows:

1. Food allergies, (immediate on RAST and delayed on BCFT, cytotoxic) and inhalant allergies to dust, moulds, etc.

to not only where indicated.

2. Antibodies to milk/grain fractions.
3. Vitamin and mineral levels including toxic metals — in serum and hair analysis. I especially request B3, looking for pellagra.
4. Antibodies to various tissue, organs and ducts and in arthritis also cartilage and synovial membrane antibodies.
5. Immunoglobulins or antibody groups.
6. Complements C3 and C4 and immune complexes.
7. Full blood count/ESR noting size and colour of red cells. Pale and small correlates with low B6 and iron. Big red cells suggest not enough Bl, B3, B12, folic acid, Vitamin C and underactive thyroid at times.
8. Fasting blood sugar ± Cortisol.
9. Kryptopyrrole in the urine (pyroluria).

Unfortunately, I rarely measure amino acids, but hope to do this regularly in certain neurological conditions from now on.

Correcting these abnormal results, which are present to varying degrees in most seriously ill patients, allows correct treatment.

Relevant vitamins and minerals and food allergy free diets are usually sufficient to reverse all the abnormal findings in the tests.

However, far more research needs to be done into the relevance of specific amino acid deficiencies *as well as* the tests mentioned in more complex conditions as certain psychiatric illnesses, certainly in cancer and degenerative neurological disorders.

I look forward to the day when all sorts of fractions of foods such as lectins are included in the delayed food allergy tests/ BCFT/cytotoxic test and not just whole foods.

I also look forward to the day when antibodies to far more fractions/lectins of wheat and grains become routine testing, looking at antibodies to avenin, secalin, hordein of grains and not just Alpha glia-din, but Beta and Gamma and Omega glia-din, to glutelins, albumins, globulins, exorphins and other prolamine and lectin fractions and their digests.

The same applies with cow's milk. We should be looking at antibodies

Alpha lactalbumin, Beta lactoglobulin and Alpha casein but also to Beta casein, Kappa casein, other globulins, etc. to find exactly which fractions are doing the damage to vessels and organs and causing psychiatric symptoms, etc. and arthritis, etc.

Finally, very serious illnesses such as cancer, MS, ALS, psychoses, arthritis will be classified into different types in terms of *toxic fractions of foods responsible* by such specialists as Orthomolecular psychiatrists trained in psychoimmunology and psycholectinology. Hopefully, before long, in cancer, the clinician will know exactly what:

1. toxic fractions of foods are suppressing the immune system and malabsorbing vitamins and minerals essential for the immune system
2. food fractions or *toxic peptides* are acting like hormones and growth factors, helping cells proliferate and allowing new blood vessels to develop (called angiogenic factors like copper and iron) and here I suspect
3. food fractions/peptides do the cancer cell have receptors for, like breast cancer cells have receptors for oestrogen or progesterone or both and are dependant on them.
4. what is the malignant environment in terms of low vitamins and minerals, prostaglandins and amino acids, and what toxic food peptides, and chemicals and hormonal imbalance allows a malignant change in dividing cells to take place.

I hope my research and yours will, with time, ensure most serious illnesses eventually will become curable, predictable and certainly preventable.

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