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An explanation on the importance of folate and ferritin levels and why you must always get copies of test results

1. Question your doctor about blood tests or any test result. Never accept your doctor's answer that everything is normal or all is fine. What may mean normal to your doctor may not be helping you at all. You could be on the low end of normal and getting worse. Ask your doctor, for copies of all of your test results, YOU ARE FULLY ENTITLED TO THEM. Some doctors may request that you put it in writing, if so, just write a letter. You may or may not be charged a fee for photocopies.

Once you get a copy of your blood tests, keep them for comparison purposes, you will learn how to interpret them and be able to see for yourself if you are improving. You will know exactly what your B12 level is and what tests may or may not have been done. Ask for copies of any letter or report that a specialist may have sent to your GP regarding your illness. The specialist may have made certain recommendations as to frequency of injections. This kind of letter is important should you change doctors.

2. Always have your doctor check your folate (folic acid) and ferritin (iron storage) levels as often as the B12 level. It is quite common for PA patients to develop another co-existing anaemia, either folate or iron. If you are low in either folate or iron, it affects the uptake of B12, meaning the B12 is not properly utilised. Further, research states that a low serum folate causes more B12 to be excreted. B12 needs folate as much as folate needs B12, they really do work hand in hand. Read more at the link below:

http://link.springer.com/article/10.1007%2F978-1-4419-2566-3_9

3. A research article by Scand J Haematol (1980) Sheppard K, Ryrie D. states that B12 levels are dependent on folate status. This means that a person could be folate deficient which causes the B12 level to go low. Once the person is treated with folic acid this also returns the B12 level to normal. However, if you are already deficient in B12 and having B12 injections the article may explain why it seems they are not working the way they should. When your folate level is low, it causes the B12 analogues (inactive B12) to increase and the cobalamin (active B12) to decrease. Inactive B12 or B12 analogues is the B12 your body cannot convert. Active B12 is the B12 your body needs and can use. Your body converts cyanocobalamin and hydroxocobalamin injections to methylcobalamin and adenosylcobalamin, these are the two active forms of B12. The link to the research article is below:

<http://www.ncbi.nlm.nih.gov/pubmed/7221475>

4. Low folate impairs glucose tolerance and can elevate cholesterol levels. These results demonstrate impaired glucose tolerance and disturbed plasma lipid profile induced by oral contraceptive treatment in folic acid deficient rats and suggest that inadequate folic acid intake might contribute to increased cardiovascular risk during oral contraceptive use that could be prevented by adequate oral folic acid intake.

<http://www.ncbi.nlm.nih.gov/pubmed/18572393>

5. Chronic conjunctivitis linked to low normal folate levels.

"The patient's level of folic acid was in the lower reference range (9.9 nmol/l, reference 7.0-40 nmol/l). Oral folic acid was prescribed to the patient by her general physician, her level of folic acid increased rapidly and she was relieved from all her symptoms. When serum levels of vitamins are measured, there are sources of error and 'grey zones' of clinical relevance. As always, the clinical picture and laboratory tests must be weighed together - treatment should not rely on a single laboratory test. Because treatment with folic acid normalized the patient's level of folic acid and relieved her from all symptoms, we believe that a clinically significant lack of folic acid did indeed exist."

<http://onlinelibrary.wiley.com/doi/10.1111/j.1600-0420.2007.01017.x/pdf>



6. Ferritin (iron storage) levels must be monitored for the following reason:

Once vitamin B12 has been administered, the increase in red cell production will increase the demand on iron stores and, therefore, it is important to monitor – and correct – any signs of iron deficiency.

<http://haematologica.com/content/91/11/1506.full.pdf>

Low iron can also cause problems with swallowing. Thanks to Nichola Watson for finding the article below -

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1440161/?page=1>

7. You need to learn as much as you can about this condition because most doctors are not forthcoming with information regarding PA/B12 Deficiency. You can read more on PA at the following links below:

<http://www.nhlbi.nih.gov/health/health-topics/topics/prnanmia/>

<http://emedicine.medscape.com/article/204930-overview>

<http://www.patient.co.uk/doctor/Pernicious-Anaemia-and-B12-Deficiency.htm>

and for more information including many research articles please visit the Pernicious Anaemia Society website and click on forum:

www.pernicious-anaemia-society.org.uk

8. Cyanocobalamin is the B12 serum that is used in the United States and Canada and some European countries. The UK, Australia, New Zealand and other countries use hydroxocobalamin. If you are not sure what serum is being used, ask your doctor. ANYONE WHO SMOKES SHOULD NOT USE CYANOCOBALAMIN IN ANY FORM, be it injections or oral tablets. Cobalamin has a strong attraction to cyanide. Heavy smokers can build up too much cyanide in their bodies which can overwhelm the pathway that converts cyanide to thiocyanate in order to detoxify the cyanide. If that happens then the body may detoxify the cyanide by attaching it to cobalamin and then excreting the cyanocobalamin. This in turn means that most of the injection is wasted.

9. Anyone who carries the Lebers Optic Neuropathy Disease gene should not use cyanocobalamin because this form of B12 can make the disease worse and could cause blindness.

10. Taking a Vitamin B complex daily does help. According to the University of Maryland University Medical Centre, "Taking any one of the B complex vitamins by itself for a long period of time can result in an imbalance of other important B vitamins. For this reason, it is generally important to take a B complex vitamin with any single B vitamin."

<http://www.umm.edu/altmed/articles/vitamin-b12-000332.htm>