



## No. 41 – Platelets and English

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Title: **Platelets and English Walnuts**

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This is the story of a very rare occurrence. However rare occurrences may teach important lessons as well as make a good story. The story of platelets and English walnuts teaches us that not all thrombocytopenia is ITP. There can be other causes.

This is the story of a 70 year old man who was discovered to have a platelet count of  $32 \times 10^9/L$  when he had a blood count done because of nausea, vomiting, and fever. He was taking no medicines and he was taking no quinine-containing beverages. Four days later the platelet count was normal with no treatment. Several months later he again had nausea, vomiting, and fever, and again his platelet count was low ( $37 \times 10^9/L$ ); as before his platelet count returned to normal in several days. After the second episode, he remembered that he had eaten English walnuts each time before he became sick. Then he did the test that explained what happened with 100% certainty. He was admitted to the hospital; his platelet count was normal at  $233 \times 10^9/L$ ; he ate 100 gm of English walnuts; 4 hours later he had nausea and fever and his platelet count was  $4 \times 10^9/L$ ! There were no abnormalities of his other blood cells. He had hematomas at the sites of needle sticks for blood counts, but no other bleeding. His platelet count was normal again in 4 days.

The next tests, performed at the Blood Center of Wisconsin in Milwaukee, explained how this happened. English walnuts were ground up and then stirred with saline (salt and water). When this saline extract was mixed with the man's serum and platelets from a normal subject, there was a strong positive reaction of antibodies from the man's serum with platelets. When saline extracts from other nuts were used, there was no reaction with platelets. When the saline extract of English walnuts was mixed with serum from a normal subject, there was also no reaction with platelets. These tests documented that the patient's serum contained an antibody that destroyed platelets only in the presence of English walnuts. The complete story of this man is being published in the *Lancet* by Drs. Roos Achterbergh and his colleagues from The Netherlands and Dr. Brian Curtis and his colleague at the Blood Center of Wisconsin.

This is an allergy to English walnuts that causes platelet destruction, as well as the nausea, vomiting, and fever. This, of course, is very rare. Much more common are allergic reactions that cause a skin rash or asthma. This type of sudden, severe thrombocytopenia can occur with quinine, either as a medicine or in beverages, such as tonic water and Schweppes bitter lemon. Thrombocytopenia caused by allergies to foods and herbal remedies are rare. These drugs, beverages, foods and herbal remedies are listed on our website ([www.ouhsc.edu/platelets](http://www.ouhsc.edu/platelets)). The importance of this story is that not all episodes of thrombocytopenia are ITP. It is particularly important to learn that repeated episodes of sudden and severe thrombocytopenia are almost always related to an allergic reaction to a medicine, food, beverage, or herbal remedy.

The English walnut allergy may not be the same as the food intolerance that is being studied with the ITP Support Association by Professor Hunter at Addenbrooke's Hospital, Cambridge. The patient described in this story had an antibody in his blood that rapidly destroyed essentially all of his platelets when English walnuts were digested and absorbed into his blood. His reaction to eating English walnuts was sudden and severe. Professor Hunter is investigating the possibility that less severe allergies or intolerance to one or more types of foods may affect the platelet count in more subtle ways. The results of Professor Hunter's studies of our ITP patients will be equally important, to identify foods that some patients may need to avoid.

Our perspective as Americans is not to say that English walnuts are bad compared to American walnuts - of course not. Wikipedia tells us that all walnuts are good for our health, and good for stress. Our story is only to remind you that people can become allergic to almost anything, and allergic reactions to foods, quinine-containing beverages, drugs, and herbal remedies can cause thrombocytopenia.