## Rhesus Negative Blood Group

Rhesus factor, referred to as the Rh factor, is a protein in the human blood. The term is derived due to the first discovery of the protein substance in the blood of Rhesus monkeys. In reference to whole of the world's population, only about 15% lack the Rhesus factor and is known as rhesus negative blood type. The remaining 85% are Rh positive. Lacking Rh factor can lead to problems especially in cases where blood transfusion or organ transplant is needed urgently.

Blood group is determined by the presence of antigen(s) on the membrane of red blood cells. The "antigens" are special molecules that can elicit an immune response. The human body recognizes its own antigens and the immune system normally will not attack its own.

Rhesus negative blood type lacks the D antigen. This is a very important factor especially for pregnant women. Blood that lacks the D antigen tends to reject its own unborn baby especially if the baby is Rhesus positive. It is commonly referred to as *'hemolytic disease'* or death of the unborn. This is a major disadvantage for people who belong to the Rhesus negative blood group.

The D antigen perpetuates the release of antibodies in the event of an invasion by viruses and bacteria. This specific antigen is found on the surface of the erythrocytes exclusively in Rhesus positive blood type individuals. This explains the weakness in Rhesus negative people against several types of diseases and illnesses.

The O-negative blood group means absence of all of the three major antigens, "A" "B" and "Rh" on the red blood cells. O-negative blood group is relatively rare and its prevalence varies among different races. Around 7-8% of the Caucasian population will have O-negative blood group. However, only 1% of the Asian population will have O-negative blood group. Overall, around 5% of the world's population will have O-negative blood group.

### Health problems associated with rhesus negative blood type.

#### 1. <u>Worse Health Status and Higher Incidence of Health Disorders in</u> <u>Rhesus Negative Subjects.</u>

Present cross sectional study performed on 3,130 subjects, showed that Rhesus negative subjects differed in many indices of their health status, including incidences of many disorders. Rhesus negative subjects reported to have more frequent allergic, digestive, heart, hematological, immunity, mental health, and neurological problems. (Including scoliosis)

# 2. <u>People with Rh negative blood type are more prone to allergies,</u> especially food allergies.

In a study published in a 2007 issue of the "Journal of the Nutritional and Environmental Medicine" Dr Laura Power described the results of her experiments on allergic responses to foods based on blood type. Rh negative blood reacted most severely with eggs, milk, cheese, nuts, beans and gluten. It was also consistently among the top producers of immunoglobulin E (IgE) Dr Powers findings regarding IgE reflect the fact that individuals with Rh negative blood are more likely to have true food allergies. The production of IgE antibodies in particular is responsible for primary food allergy symptoms. Rh negative blood types had the most severe response to peanuts, suggesting a propensity for peanut allergy.

#### 3. <u>Rhesus Factor Modulation of Effects of Smoking and Age on Psychomotor</u> <u>Performance, Intelligence, Personality Profile, and Health in Czech Soldiers</u>

RhD phenotype modulates the influence not only of latent toxoplasmosis, but also of at least two other potentially detrimental factors, age and smoking, on human behavior and physiology. The negative effect of smoking on health (estimated on the basis of the self-rated number of common viral and bacterial diseases in the past year) was much stronger in RhD-negative than RhD-positive subjects. It is critically needed to confirm the differences in health response to smoking between RhD-positive and RhD-negative subjects by objective medical examination in future studies.

# 4. Rh factor, family history and risk of breast cancer: a case-control study in Uruguay.

We found that the absence of Rh factor (Rh-) was positively associated with the risk of BC (adjusted Odds Ratio [OR]=1.49, 95% Confidence Interval [95% CI] 1.05-2.11). Stratified analyses by family history of BC showed a strong association for Rh- with a positive history of first degree relatives (OR=3.17, 95% CI 1.06-9.47). Also stratified analyses by family history of other cancers showed a positive association for Rh- with a positive history of first degree relatives (OR=2.08, 95% CI 1.05-4.11).

#### Rhesus negative blood type and exposure to mercury

#### 5. <u>Neurodevelopmental Disorders, Maternal Rh-Negativity, and Rho(D)</u> <u>Immune Globulins: A Multi-Center Assessment.</u>

Many formulations of Thimerosal (49.55% mercury by weight)- containing Rho(D) immune globulins (TCRs) were routinely administered to Rh-negative mothers in the US prior to 2002.

In the present study, an examination of the relationship between maternal Rhnegativity, Rho (D)-immune globulins, and neurodevelopmental disorders (NDs) was undertaken. It was observed that Caucasian children examined with NDs born from 1987 through 2001 were significantly more likely to have Rh-negative mothers than Caucasian children without NDs born from 1987 through 2001 that presented for outpatient paediatric care or among a series of Caucasian mothers that presented for outpatient prenatal genetics care from 1980 through 1989. It was also observed that Rh-negativity among Caucasian children with NDs born after 2001 had a similar frequency of Rh-negative mothers as controls.

#### <u>6. A prospective study of Thimerosal-containing Rho(D)-immune globulin</u> administration as a risk factor for autistic disorders

This study evaluated the relationship between prenatal mercury exposure from Thimerosal (49.55% mercury by weight)-containing Rho(D)-immune globulins (TCRs) and autism spectrum disorders (ASDs).

Results: Children with autism spectrum disorders, ASDs (28.30%) were significantly more likely (odds ratio 2.35, 95% confidence interval 1.17–4.52, p50.01) to have Rhnegative mothers than controls (14.36%). Each ASD patient's mother was determined to have been administered a TCR during her pregnancy.

Conclusion. The results provide insights into the potential role prenatal mercury exposure may play in some children with autism spectrum disorders.

#### 7. Effects of mercury administered during pregnancy.

At a DAN (Defeat Autism Now) Conference 53.7% of the mothers present who had autism spectrum disorder children were Rh negative. Other studies showed 37% of autism spectrum disorder children have Rh-negative mothers, although the incidence of RH neg. is estimated at only 3% to 7% of the female population.

https://www.midwiferytoday.com/enews/enews0624.asp

#### Rhesus negative blood type, exposure to mercury and scoliosis

I have noticed a significant difference between patients with rhesus negative blood type and rhesus positive. Rhesus negative types appear to have more health problems, especially when exposed to mercury, either from vaccines, amalgam fillings, fish, or occupational exposure. This became apparent during my research on scoliosis and exposure to mercury.

#### RESULTS OF BLOOD GROUP ANALYSES

Over 50% of participants/or their mothers (26 out of 51) in my study, had rhesus negative blood type.

21 were blood group "O" 5 were blood group "A"

This is highly significant, when one considers that overall, only around 5% of the world's population will have O-negative blood group.

\*Thimerosal, a mercury preservative, was added to the Anti D Immunoglobulin vaccine, from 1968 to 2001 and administered to Rhesus negative pregnant and nursing women. (25 mcg in each vaccine x 2) **14 participants, or their mothers, in this group, had received this vaccine.** 

(The O-negative blood group means absence of all of the three major antigens, "A" "B" and "Rh" on the red blood cells.)

#### Why does mercury impact on the spine, particularly in rhesus negative blood group, especially "O" type?

#### **Cell Membrane Defects**

Histochemical changes may indicate a defect in the cell membrane. The cell membrane contains numerous thiol sites. Mercury binds to these sites and prevents the passage of certain materials into and out of the cells.

The picture below demonstrates widespread distribution of mercury in the body of a mouse. Connective tissue is very prone to mercury binding. One of the reasons for this is that mercury is particularly keen to bind to two amino acids; methionine and cysteine. Both amino acids contain sulphur hydrogen (SH)-groups. Sulfhydryl bonds (SH) are common in protein molecules that make up various hormones and enzymes. Mercury easily replaces the hydrogen in these bonds, thereby deactivating the protein. Collagen tissues are rich in SH-groups.



Harder's lymphnode Heart

Bladder

Figure 1 Distribution of radioactivity in male mouse 6 hours after intravenous injection of 203HgCl2 (mercury chloride) Magnification 2x The autoradiography is courtesy of Anette Ceo.

(Melisa Foundation)

### 8. Thrombocyte (Platelet) Abnormalities

Many investigators have noted abnormalities in the structure and function of thrombocytes (also known as platelets) in patients with idiopathic scoliosis (IS)

Calmodulin is a calcium-binding receptor protein that regulates the contractile properties of muscles and platelets. Increased Calmodulin levels in platelets have been shown to be associated with the worsening of adolescent IS. These data are particularly important when compared with the reports on melatonin, in which decreased levels of melatonin were found in persons with adolescent IS and curve progression greater than 10°. Melatonin binds to Calmodulin and has been shown to act as a Calmodulin antagonist. These changes again suggest a cell membrane defect in patients with idiopathic scoliosis.

## 9. Metal Impregnation Abnormalities in Platelets of Patients with Idiopathic Scoliosis

#### Abstract

A heavy metal impregnation technique revealed that platelets from patients with idiopathic scoliosis (IS) are more frequently 'metallophilic' and have a higher surface to volume ratio of the dense tubular system (DTS) than age-matched controls. These findings suggest that the fundamental defects in IS platelets involve membrane abnormalities related to cation binding and transport.

Metallophillic means greater attraction or affinity to metal ions which makes the cell membranes more susceptible to ADSORPTION (attaching of the metal ions to the outside of the cell)

#### 10. <u>Negative Surface Charge on Platelets of Patients with Idiopathic</u> <u>Scoliosis</u>

#### Abstract

In order to assess the negative surface charge on platelets from patients with idiopathic scoliosis (IS) and suitable controls, formalin-fixed cells were examined by the two-phase aqueous polymer separation system and by binding of cationised ferritin. The results show that IS platelets have a higher negative surface charge. This could be responsible for several functional and structural abnormalities observed previously in IS platelets.

#### 11. <u>Current Concepts Review</u> <u>Etiology of Idiopathic Scoliosis: Current Trends in Research</u>

Multiple pathological biochemical and histological changes have been noted in the platelets of patients with adolescent idiopathic scoliosis. As previously discussed, these changes are similar to those in paraspinous muscle and suggest a primary defect in cells with a contractile system. Some of these abnormalities appear to be related to a defect in the cell membrane and include elevation of intracellular calcium and phosphorus levels, decreased activity of intracellular contractile proteins, decreased platelet aggregation, increased numbers of intracellular

dense bodies, a greater number of metallophilic cells, a higher negative surface charge of platelets, increased Calmodulin activity, abnormal peptide structure of the

myosin chains, and a decreased number of alpha-2 adrenergic receptor sites on platelets. A small percentage of thrombocytes in patients with idiopathic scoliosis are larger than normal. This has not been described in controls.

These changes in platelet morphology and physiology suggest a cell-membrane defect in patients with idiopathic scoliosis.

#### **Conclusion**

We can conclude that the rhesus negative group is more susceptible to health problems, especially if exposed to mercury from vaccines, dental amalgams, fish and occupational exposure.

The rhesus negative group is more susceptible to the effects of mercury because the cell membrane is more vulnerable, as it's missing important antigens. Could this enable mercury to adhere to the cell membrane wall, creating damage to the extracellular matrix of the cell, (ECM) especially collagen, which is the major structural protein of ECM?

Cell membrane defects are also present in scoliosis. Could this be because the cells are more metallophilic?

Further research is needed to clarify the biological role of the rhesus proteins in the red cell membrane.

#### **Rebecca Dutton 2017**

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# 10. Negative Surface Charge on Platelets of Patients with Idiopathic Scoliosis Yarom R. Meyer S. More R.

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## 11. Current Concepts Review

Etiology of Idiopathic Scoliosis: Current Trends in Research

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