

Circulations



www.isabb.org

Indiana State Association Of Blood Banks

ISABB Newsletter

% St. Francis Hospital

1600 Albany

Beech Grove, IN

INDIANA STATE ASSOCIATION OF BLOOD BANKS



WE WANT YOU! If You'd Like To Serve...

We are asking for anyone who would like to serve as a Board or Committee member for the Indiana State Association of Blood Banks to let us know. Our By-Laws require that we nominate three new Board Members for a two year commitment to replace the three outgoing Board Members. Occasionally, like last year, when a Board Member is elected to an Officer position, we may have an additional vacancy to fill. If you'd like to serve on a committee to become more familiar with the workings of the ISABB before committing to a board position, then we have several to choose from including: Communications, Education, Legislative, and Membership. Whatever your talents are, we will put them to work to improve Blood Banking in Indiana! If you'd like to submit your name or a co-worker's name, then please contact us at our Web Site ISABB.org or e-mail Jennifer Rhamy at jrhamy@indianablood.org.



ISABB

February | March | Winter '08

newsletter

Circulations

INDIANA STATE ASSOCIATION OF BLOOD BANKS
ISABB NEWSLETTER

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We Want You!

Bring Value Through Technical Education

What brings us joy about our jobs? Many of us might say the satisfaction of helping others by providing safe and timely blood transfusions, whether by drawing donors or cross matching units. Others might say it is the challenge of solving problems. It strikes me each year as we interview prospective specialist on blood bank students for the center how many of them read mysteries. We ask about hobbies at the end of the interview and almost all candidates we speak to volunteer that this is their favorite reading material. We probably all played a lot of CLUE as kids as it makes sense that analytical types who enjoy figuring out little + 's and 0's in a column would actually want to know if the butler killed Miss Scarlet in the library with a rope!

One way our jobs give back to us is through continuing education. We are eager to learn more to challenge our intellects, just like reading mysteries. We are eager to learn more to be better at what we do. And we are eager to learn more to keep up with the rapidly evolving technology driving our industry. Continuing education is an investment in ourselves, and those who work with us.

The ISABB is a partner in the quest for continuing education. The dedicated Education committee led by Beth Hughes has an excellent line up for this association year. In March or April, you can attend the Spring Workshop with its selection of serology and quality topics. This summer, Jan Stuckey is organizing a Transfusion Administration half-day workshop directed towards nurses and their laboratory counterparts. The Annual Meeting will be jam-packed with information for two days this fall including blood product management, management and ethical issues, and hot topics.

O, please join us. You deserve to invest in yourself!

President: Jennifer Rhamy



BE PREPARED

Blood Banking Professionals as Blood Donation Advocates

Jayanna Slayten, MS, MT(ASCP)SBB - Indiana Blood Center IRL Manager, Education Coordinator of the IBC SBB Program and ISABB Education Committee Member.

As a blood banking professional, I have to be prepared to answer questions about blood donation from family, friends and complete strangers. Usually when someone asks me what I do and where I work, my response is "I work at the blood center in a troubleshooting blood bank that finds blood for those who have trouble finding compatible blood." The usual response is something along the lines of either "I am a regular donor," or "I haven't donated in a long time," and/or the person will tell me a story of how they tried to donate in high school or college and haven't donated since. Opening this discussion allows me to be an advocate for blood donation in a positive and personal way. All blood bank professionals should be ready to answer questions about where you work and what you do. Check out some FAQ with the answers from AABB, so that you can be ready when the next opportunity to be an advocate for blood donation comes your way.

Information From:

http://www.aabb.org/Content/Donate_Blood/Blood_Donation_FAQs/donatefaqg.html

Blood Donation

Frequently Asked Questions

What are the minimum requirements to become a blood donor?

In general, you must be at least 16 years of age, a minimum of 110 pounds, and in basic good health. Check with local blood center to determine the exact requirements.

Will donating blood hurt?

Yes, but it is minor. You may feel a slight sting in the beginning lasting only a couple of seconds. There should be no discomfort during the donation.

How long will the actual donation process take?

The actual donation takes about 5-10 minutes. The entire donation process, from registration to post-donation refreshments, takes about one hour.

How much blood is taken?

For a whole blood donation, approximately one pint is collected.

For an automated platelet donation (platelet apheresis), the amount collected depends on your height, weight and platelet count.

How will I feel after I donate?

Most people feel great after giving blood. If you feel any abnormal symptoms, let a staff member at the blood donation center or blood drive know. You should avoid



lifting heavy objects or strenuous exercise for the next 24 hours. You can resume full activity as long as you feel well.

How often may I donate?

For whole blood, you may donate blood once every 56 days. This period of time allows for your red cells to be replenished. Automated Platelet (apheresis) donors may donate as often as once every seven days and up to 24 times per year. This is because the body replenishes platelets and plasma more quickly than red cells.

How many people can I help with my donation?

You can help multiple patients with one donation. Each unit of whole blood normally is separated into several components:



- Red blood cells may be stored under refrigeration for a maximum of 42 days, or they may be frozen for up to 10 years. Red cells carry oxygen and are used to treat anemia.

- Platelets are important in the control of bleeding and are generally used in patients with leukemia and other forms of cancer. Platelets are stored at room temperature and may be kept for a maximum of five days.

- Fresh frozen plasma, used to control bleeding due to low levels of some clotting factors, is kept in a frozen state for usually up to one year.

- Cryoprecipitated AHF, which contains only a few specific clotting factors, is made from fresh frozen plasma and may be stored frozen for up to one year.

- Granulocytes are sometimes used to fight infections, although their efficacy is not well established. They must be transfused within 24 hours of donation.

- Other products manufactured from blood include albumin, immune globulin, specific immune globulins, and clotting factor concentrates. Commercial manufacturers commonly produce these blood products.

Why so many questions on the health history questionnaire every time I donate?

To ensure the safest possible blood supply, all donors must be asked all the screening questions at each donation. The FDA requires that all blood centers conform to this practice.

- **If I just received a flu shot, can I donate blood?** Yes. There is no waiting period to donate after receiving a flu shot.

- **If I have a cold or the flu, can I donate blood?** In order to donate, blood centers require that you be in generally good health (symptom-free) and recommend that you are feeling well.

The first component of increasing muscular strength is accomplished with a class of drugs known as acetylcholinesterase inhibitors. Pyridostigmine is a commonly used member of this class. These drugs prevent acetylcholinesterase from removing acetylcholine in the synaptic cleft. Therefore, the amount of acetylcholine in the synaptic cleft will be amplified which will allow for activation of partially damaged motor end plates. This therapy relieves symptoms, but does not reduce the damage caused by the antibody.

The second component of treatment is designed to reduce the production of antibodies. Immune suppressive agents such as the corticosteroid prednisone will decrease the production of the offending antibody. This treatment is nonspecific and often produces serious long-term side effects. Since IgG antibodies have a half-life of approximately 18 days, it may take several weeks for the offending antibodies to decrease to an insignificant level.

The third component of treatment consists of removing pre-existing antibodies from the blood using plasmapheresis or IVIG. IVIG binds to the offending antibodies preventing further attack of the neuromuscular junction. Plasma exchange removes existing antibody from the plasma compartment. Since antibody exists throughout the body, several plasma exchanges are required to lower the offending antibody's titer to an insignificant level. Both the second and third components of treatment allow for rest and healing of the neuromuscular junctions and production of replacement acetylcholine receptors.

Treatment for myasthenia gravis is further classified into short-term treatment and long-term maintenance. Short-term treatment is used for severe symptoms such as a myasthenic crisis or the presence of bulbar symptoms, and usually includes aggressive plasmapheresis or IVIG. A typical plasmapheresis regimen consists of a one volume plasma exchange given every other day for a total of 5 treatments. IVIG is dosed

over 5 days. These methods can dramatically reduce symptoms and are generally effective over several weeks. With the addition of immunosuppressive agents, some patients do not have recurrence of their symptoms.

The long-term management consists of the use of immunosuppressive agents including corticosteroids. Some cases of myasthenia gravis are associated with a tumor of the thymus called a thymoma. In these patients, removal of the thymus gland may eliminate the symptoms of the disease. However, a full response may take several years after the thymectomy. Generally, the medical management of anti-AChR is less complicated than the management of anti-MuSK subtype. The anti-MuSK appears to be more common in women and often presents with more severe bulbar symptoms.

In summary, myasthenia gravis is an autoimmune disease that causes muscle weakness that almost always involves the eyes. The mechanism involves damage to components of the muscle motor end plate required to process stimulatory signals from nerves. In most cases the antibodies are to the acetylcholine receptor (anti-AChR). Treatment consists of acetylcholinesterase inhibitors, immunosuppressive agents, plasmapheresis or IVIG, and, in some cases, thymectomy.

General Information:

National Institutes of Neurological Disorders and Stroke (NINDS).

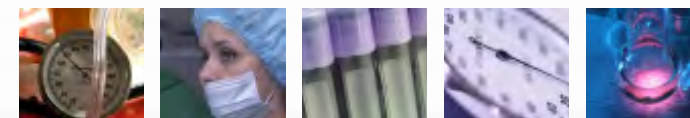
http://www.ninds.nih.gov/disorders/myasthenia_gravis/detail_myasthenia_gravis.htm

Additional References:

Deymeer F, Gungor-Tuncer O, Yilmaz V, et al. Clinical comparison of anti-MuSK- vs anti-AChR-positive and seronegative myasthenia gravis. *Neurology* 2007;68:609-11.

Richman D, Agius M. Treatment of autoimmune myasthenia gravis. *Neurology* 2003;62:1652-1661.

Romi F, Gilhus NE, Aarli. Myasthenia gravis: clinical, immunological, and therapeutic advances. *Acta Neurol Scand* 2005;111:134-141.



DEAR LABBY

Dear LABby,

Help us! We have a patient that regularly requires platelet transfusions. The doctor orders HLA-matched platelets to be transfused to this refractory patient. It is difficult to get a match for her every time a transfusion is needed. Sometimes we give non-matched platelets while we're awaiting an HLA-matched product, however this does not give her the necessary "bump" in her platelet count. What should we do?

Helpless in the Hoosier State

Dear Helpless Hoosier,

Help IS available! Blood centers often provide crossmatch-compatible platelets for patients that are refractive. Refractory patients are those that don't get an increase (or bump) in their platelet count post transfusion, unless they receive HLA-matched or crossmatch-compatible platelets. This refractoriness is most likely due to alloimmunization. When a patient is waiting for an HLA-matched platelet product, or if the patient's HLA type is unknown, a platelet crossmatch can be performed by testing patient plasma with apheresis platelets. The compatible product can be given to the patient, and it will most likely give the needed "bump" in the platelet count. If the patient needs platelets while the crossmatch is being performed, pooled random platelets may be more helpful than one apheresis (non-HLA or non-crossmatched) product, since 5-6 donors are being pooled, you increase then chances that some of the platelets in that dose will be similar to the patient's platelets.

CASE STUDY: MYASTHENIA GRAVIS

Submitted by Dr. Steven Gregurek,
Indiana University School of Medicine

Clinical vignette. A previously healthy, 35-year-old woman developed double vision, drooping eyelids, upper-body weakness, and fatigue after walking short distances. Her family physician referred her to a neurologist, and, after further work-up, she was diagnosed with myasthenia gravis. Her treatment included pyridostigmine, prednisone and IVIG. After a few months relatively symptom free, not only did her previous symptoms return, but now she had difficulty swallowing and eating. Her neurologist admitted her to the hospital and ordered serial plasmapheresis. After 5 plasma exchanges, her symptoms began to improve. She continued 5 more plasma exchanges once per week as an outpatient with nearly complete resolution of her symptoms.

Myasthenia gravis is an autoimmune neuromuscular disease with an incidence of 5 to 25 per million people. It occurs more commonly in women, but men are also affected. The disease can occur at any age but is less likely in children and the elderly. The disease causes weakness and fatigue of muscles and may progress to a life threatening myasthenic crisis. Since this disease affects muscles, the sensation to touch and pain remains normal.

Nearly all patients experience weakness in the muscles surrounding their eyes. Diplopia, or double vision, is caused by weakness in the muscles attached to the globe of the eye. Ptosis (pronounced TOE-sis) is a drooping of the eyelids caused by weakness of the facial muscles controlling the eyelid. Often, patients with myasthenia gravis experience muscle weakness after exercise that improves with rest. Weakness can also develop in

the neck, arms, and legs that can interfere with the ability of the patient to hold objects or walk.

Bulbar symptoms are severe symptoms that involve the muscles of the mouth and throat. The name is derived from the brainstem origin of the nerves that innervate this region. Voice changes, hoarseness and difficulty speaking may develop. Weakness with the jaw muscles may impede eating and talking. Many



patients have difficulty swallowing and are prone to choking.

Approximately 1 out of 10 patients will develop a severe complication known as a myasthenic crisis. The respiratory muscles necessary for breathing are often affected. Weakness in these muscles quickly leads to respiratory failure. Without intervention this crisis can be life threatening and historically was a common cause of death before modern intensive care and respiratory support. In addition, severe weakness may develop in all of the limbs called quadriparesis. Myasthenic crisis has been associated with recent viral or bacterial infections, but a trigger is not identified in many cases.

Our current understanding of myasthenia gravis is autoimmune damage to the neuromuscular junction. A properly functioning neuromuscular junction is illustrated. The neuromuscular junction is composed of a nerve ending called the terminal axon; a specialized area of a muscle cell termed the motor end plate; and the intervening gap known as the synaptic cleft. When a nerve receives a stimulatory signal, an electric pulse propagates through the terminal axon, which

is followed by the release of small packets of acetylcholine into the synaptic cleft. The acetylcholine quickly diffuses through the synaptic cleft and activates a specialized protein on the motor end plate known as an acetylcholine receptor. The activated acetylcholine receptor initiates a cascade of chemical reactions that cause contraction of the muscle fiber. Excess acetylcholine is removed by the enzyme acetylcholinesterase.

In myasthenia gravis, the autoimmune system produces aberrant antibodies that attach to components of the motor end plate leading to cell-mediated damage to the acetylcholine receptor and associated proteins. This process decreases the ability of acetylcholine to bind to the acetylcholine receptor. As increasing numbers of motor end plates are damaged, the muscle fiber becomes unable to respond to a stimulus from the nerve and weakness ensues. After time, these antibodies can cause chronic damage to the motor end plate.

A neurologist makes the diagnosis of myasthenia gravis after a series of tests assessing muscle weakness and fatigue. Confirmatory testing is usually obtained by finding antibodies to components of the neuromuscular junction. Myasthenia gravis can be divided into three subtypes based on the specificity of the antibody. Approximately 80% of cases belong to the anti-acetylcholine receptor (anti-AChR) subtype. The remainder is divided between the anti-muscle-specific tyrosine kinase (anti-MuSK) subtype and the seronegative (SN) type, which is negative for both anti-AChR and anti-MuSK.

The treatment of myasthenia gravis has three components consisting of improving strength, decreasing production of antibody, and removing existing antibody.



BLOOD BANK CRASH COURSES | 2008

February: Repeat Basic Blood Bank Crash Course

February 21, 2008 8am-12pm | Routine Blood Bank Testing Review
(repeat from 2005-07)

February 21, 2008 1pm-4:30pm | Review of General Transfusion Practices (repeat from 2005-07)

February 26, 2008 8am-12pm | So your antibody screen is positive?
(repeat from 2001-07)

March: New Basic Blood Bank Crash Course

March 4, 2008 8am-12pm | ABO Discrepancy Resolutions: The ABC's of ABO's

March 18, 2008 12pm-4pm | ABO Discrepancy Resolutions: The ABC's of ABO's

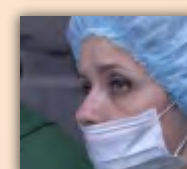
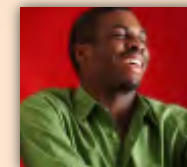
March: Intermediate/Advanced Blood Bank Crash Course

March 6, 2008 12am-4pm | Serologic Troubleshooting: When the ABCs look like XYZs

March 11, 2008 8am-12pm | Serologic Troubleshooting: When the ABCs look like XYZs

Classes are at: Indiana Blood Center

To register go to www.indianablood.org and click on the education link



• **Can I still donate if I have high blood pressure?** Yes, if your blood pressure is under control and within the limits set in the donation guidelines.

• **Can I donate if I am taking aspirin or medication prescribed by my doctor?** Aspirin and ibuprofen will not affect a whole blood donation. Apheresis platelet donors, however, must not take aspirin or aspirin products 36 hours prior to donation. Many other medications are acceptable. It is recommended that you call the donor center ahead of time to inquire about any medications you are taking.

What types of tests are performed on donated blood?

After blood is drawn, it is tested for:

- ABO group (blood type)
- RH type (positive or negative),
- unexpected red blood cell antibodies
- Hepatitis B surface antigen (HbsAg)
- Hepatitis B core antibody (anti-HBc)
- Hepatitis C virus antibody (anti - HCV)
- HIV-1 and HIV-2 antibody (anti-HIV-1 and anti-HIV-2)

• HTLV-I and HTLV-II antibody (anti-HTLV-I and anti-HTLV-II)

- Serologic test for syphilis
- Chagas Disease testing
- Nucleic Acid Amplification Testing (NAT) for HIV, Hepatitis, West Nile Virus

What does it mean if I am deferred as a blood donor?

Individuals disqualified from donating blood are known as "deferred" donors. If a person is to be deferred, his or her name is entered into a list of deferred

donors maintained by the blood center, often known as the "deferral registry." If a deferred donor attempts to give blood before the end of the deferral period, the donor will not be accepted for donation.



Once the reason for the deferral no longer exists and the temporary deferral period has lapsed, the donor may return to the blood bank and be re-entered into the system.

Those who may be deferred include:

- Anyone who has ever used intravenous drugs (illegal IV drugs)
- Men who have had sexual contact with other men since 1977
- Anyone who has ever received clotting factor concentrates
- Anyone with a positive test for HIV (AIDS virus)
- Men and women who have engaged in sex for money or drugs since 1977
- Anyone who has had hepatitis since his or her eleventh birthday
- Anyone who has had babesiosis or Chagas disease
- Anyone who has taken Tegison for psoriasis

- Anyone who has risk factors for Cruetzfeldt-Jakob disease (CJD) or who has an immediate family member with CJD
- Anyone who has risk factors for variant CJD
- Anyone who spent three months or more in the United Kingdom from 1980 through 1996
- Anyone who has spent five years in Europe from 1980 to the present.

If I was deferred once before, am I still ineligible to donate?

If your deferral is of a permanent nature, you will be informed. Otherwise, the deferral time depends upon the reason for deferral. Prior to each donation, you will be given a mini-physical and medical interview. At that time, it will be determined if you are eligible to donate blood on that particular day.

What can you do if you aren't eligible to donate?

While a given individual may be unable to donate, he or she may be able to recruit a suitable donor. Blood banks are always in need of volunteers to assist at blood draws or to organize mobile blood drives. In addition, monetary donations are always welcome to help ensure that blood banks can continue to provide safe blood to those in need.

Where can I donate blood?

Go to www.aabb.org and use the blood center locator to find the blood donation center nearest you, and then contact the blood bank to make an appointment and find out what they require.



GUIDELINES FOR GIFTING ISABB SPEAKERS

Depending on the current ISABB Board approval and the organization's current financial situation, it will be the intention of the Indiana State Association of Blood Banks to gift all invited speakers to their sponsored events. Panel members and/or group leaders may or may not be gifted depending on their amount of participation in the sponsored event.

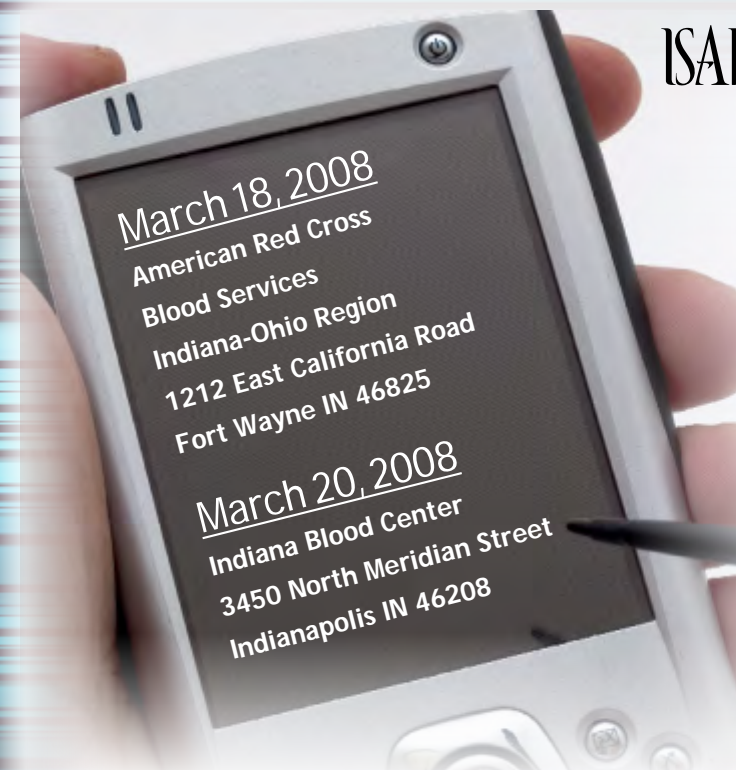
The responsible chairperson/committee will present the idea(s) for gifting to the board for approval prior to the event. In any case, the gift should not exceed \$100.00 in value. This amount may be

changed by the board in the future, but is stated to prevent escalation of the gift value from year to year.

It will be the policy of the ISABB to pay all reasonable expenses, when requested by the invited speaker, dependent on the financial resources of the organization. Reasonable shall be defined as those expenses that are normally incurred in the process of participating in the sponsored event. Speaker honorarium is considered an ancillary expense by the ISABB and generally will not be honored, unless an exception is made with a majority of the

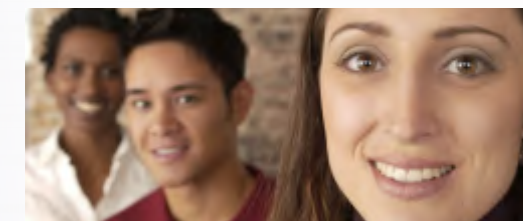
board present for approval. Extraordinary speaker expenses will also need to be approved by the board and should be done prior to inviting the speaker, whenever these expenses can be anticipated prior to the event.

Revision accepted by ISABB Board on 1/10/08



ISABB SPRING WORKSHOP | 2008

Two Locations | **March 18** or **March 20**



INTENDED AUDIENCES:

Blood Banking Technologists and Supervisors—limited to 20-25 people at each location.

PRESENTERS:

IRL Managers and staff from Indiana Blood Center and American Red Cross.

MORNING

\$20 Morning only

MORNING

QUALITY WORKSHOP:

8:00 am Registration

8:30 a.m. - 11:30 a.m.

Transfusion Service Committee Management

LUNCH

\$40 All DAY

LUNCH

11:30 a.m. - Noon

Lunch provided for those who register for ALL DAY.

REFRESHMENTS

provided morning & afternoon

AFTERNOON

\$20 Afternoon only

AFTERNOON

SEROLOGIC WORKSHOP:

11:30 am Registration

12 Noon - 3:00 p.m.

Patients with Antibodies How to Manage Repeat Investigations

TECHNICAL CONTACTS:

Peggy Ball, Reference Lab Manager | Tel. 260.480.8273 | Fort Wayne

Jay Slayten, Reference Lab Manager | Tel. 317.916.5186 | Indianapolis

REGISTRATION CONTACT:

Maxine Skelton, Administrative Assistant | Tel. 260.480.8237 | Fort Wayne

MAIL REGISTRATION TO:

Maxine Skelton, Administrative Assistant | American Red Cross Blood Services, IN-OH Region
1212 East California Road - Fort Wayne IN 46825

Make checks payable to: **Indiana State Association of Blood Banks**