



e-Network Forum

CALIFORNIA BLOOD BANK SOCIETY

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Donor suitability in the presence of an IRREGULAR pulse

A blood banker asked what others consider the "**Standard of Practice**" on donor suitability in the presence of an IRREGULAR pulse. The inquiring blood banker said that he has always treated an irregular pulse as an 'absolute' contraindication to blood donation because of the possibility of underlying cardiac disease. The current **Technical Manual** (13th edition) states that the pulse rate of a prospective blood donor should be counted for at least 15 seconds and should exhibit no rhythmic irregularity, and the frequency should be between 50 and 100 beats per minute. If a prospective donor is a known athlete with high exercise tolerance, a pulse rate below 50 may be noted and should be acceptable. A blood bank physician should evaluate marked abnormalities of pulse and recommend acceptance, deferral, or referral for additional evaluation. According to the Editor of the upcoming 14th edition of the Technical Manual, the wording of the next Technical Manual is essentially unchanged regarding pulse. According to the **Director of Standards and International Affairs of the AABB**, the language regarding donor pulse has not changed in the 21st edition compared with the current 20th edition. Basically, the 21st edition of Standards permits a donor's pulse to be acceptable if it is less than 50 beats per minute, provided the prospective donor is an otherwise healthy athlete. The 21st edition will be available for purchase by January 1, 2002, and will become effective on May 1, 2002.

The following practices on this subject were shared with the e-network forum:

1. **A blood bank medical specialist in North Carolina** stated that at his facility their criterion to refer a prospective donor for medical evaluation due to irregular pulse is whenever there are **more than 4 irregular beats per minute**. The decision to defer or accept such a donor is based upon the donor history and physical exam. They accept more donors who have irregular heart beat than they defer, although many of the donors are just over their cutoff, with 5-6 irregular beats per minute, but without any history of heart disease.
2. **A blood bank medical specialist in Texas** reported that at his blood center they tend to be fairly conservative with irregular pulses in allogeneic donors because they have many distant draw sites with no physician or nurse present. Their policy is to defer for 24 hours any allogeneic donor with an irregular pulse (or a pulse greater than 100 beats per minute). Autologous donors may donate with an irregular pulse if they have been evaluated by their personal physician and have consent from that physician to donate with the irregular pulse. The responding blood banker occasionally lets longtime donors with a "benign" irregularity of pulse donate if he has received written clearance from the donor's personal physician. He would then write the donor a letter to carry with them so that the blood center physician does not need to be contacted every time they present unless something has changed in their history or physical findings. (**Editor's NOTE:** The e--Network Forum recently discussed the need for a system to be in place to provide [medical clearance of high risk autologous donors](#).)
3. **Another North Carolina blood bank medical specialist** implied that some irregular heart rhythms are far more dangerous (worrisome) than others. For example, he pointed out that an occasional PVC generally is not of clinical significance. However, atrial fibrillation is more onerous.
4. **A New York blood bank physician** commented that the most common pulse irregularity is premature ventricular beats. When present in **3 or fewer per minute** in someone with no history of cardiac disease (in his opinion) these are invariably benign. A well done history and the presence of PVCs at this level is not a contraindication to donation (again in his opinion). More complex pulse irregularities require evaluation by an internist, cardiologist or other knowledgeable physician with access to an EKG machine prior to clearance for donation.
5. **A blood bank physician in Northern California** whose school's football team knocked the UCLA Bruins out of contention for the future 2002 BCS (Bowl Championship Series) game says her donor center requires annual written authorization from the donor's physician if the donor has any of:
 - a. > 2 skipped/extra beats/minute
 - b. An arrhythmia treated with medication

c. An arrhythmia resulting in restriction of activities.

With this authorization they permit donation if the pulse is between 50-100 beats/minute.

6. **A blood banker who works in the Northwestern area of the US** reported that his blood center's donor suitability criteria regarding an irregular pulse are based specifically on the number of irregular beats per minute. If the person performing a physical exam notes any irregular pulse, the donor is asked to rest for 10 minutes, after which the pulse is rechecked. If 1 to 5 irregular beats per minute are observed, the donor is asked if any of following cardiac symptoms have been experienced within the last 6 months: chest pain, shortness of breath, dizziness or fainting, weakness or need to restrict activity, or episodes of very rapid or very irregular heart beat (on or off medication). If the donor answers yes to any of these cardiac symptoms, they are deferred from giving blood for at least six months from the date of the last symptoms. If the donor answers no, he/she is eligible to donate. (b) **If 6 or more irregular beats per minute** are observed, the donor is asked if his/her physician is aware of the situation. The donor is also temporarily deferred.

ADDENDA Oct. 31, 2001

7. **A blood banker in England** commented that in his country "**whole blood donors do not have their pulse or blood pressure checked.** The vast majority of mobile collection units are run by nurses with no doctor on site, and have been very successful with no adverse effects. Donors who donate by machine apheresis have their pulse and BP checked; those with an irregular pulse are not accepted."

ADDENDA Nov. 1, 2001

8. **A blood bank physician in Rhode Island** reported that at her center they accept individuals with irregular pulses **as long as it is between 50-90/min.** and the person has no symptoms. They accept athletes with a pulse less than 50. They implemented the irregular pulse eligibility policy about 1 year ago; prior to that they prohibited donors who had 10 or more irregular beats per minute. She reports that their experience has been positive with this change.

ADDENDA Nov. 12, 2001

9. An **international member** of the e-network wrote: "At our blood centre ([Bloedbank Leiden-Haaglanden](#)) the criteria are based on the Netherlands national Guideline:

- pulse rate 50-110/min
- regular rhythm.

Irregularity is evaluated by the donor physician who is in attendance at the session. Respiratory arrhythmia or occasional PVCs are permitted. Other irregularities will lead to deferral and generally to advice to the donor to consult their family doctor."

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Addenda: Oct. 31, Nov. 1 & 12, 2001