

# Getting started with blood collection: An Introduction for Behavioral Scientists

Center for Translational and Prevention Science, University of Georgia

## Getting Started

Collecting blood from human research subjects is now a common practice. Given technological advances that have reduced costs, as well as greater emphasis on biological markers from funding agencies, many social scientists and behavioral researchers are beginning to consider how to incorporate this type of data into their research programs.

Collecting blood samples is unique to every study. There are multiple ways blood can be collected and multiple ways analyses can be conducted. This document provides a brief orientation to behavioral researchers unfamiliar with blood collection requirements. There is much more to learn, but hopefully this provides a good start!

When beginning a new research study that will include blood collection from human participants, remember to review the guidelines provided by the [US Department of Health and Human Services](#) and your sponsoring Institutional Review Board

## Identify a collaborator

Identifying a collaborator with expertise in blood collection and analysis is essential when beginning work this area. The equipment costs, as well as necessary skills in conducting blood assay and interpreting results, are unlikely to be quickly obtained by a novice. A contract with this laboratory should be established before the project start date. Example questions to consider include:

- ✓ How and when samples will be analyzed?
- ✓ What will be costs to store and analyze blood samples?
- ✓ How will results from analyses be disseminated?
- ✓ Who will retain rights to scientific products from study?
- ✓ How long will samples be stored?

## Department of Health and Human Services, NIH Rules



*Subjects must be healthy, non-pregnant adults who weigh at least 110 pounds (50 kg). For these subjects, the amounts drawn may not exceed 550 ml in an 8 week period and collection may not occur more frequently than 2 times per week.*



*The probability and magnitude of harm [during blood collection] or discomfort anticipated should not be greater than during the performance of routine medical examinations.*

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## Data collection

### Staffing:

Hiring certified Phlebotomists will be necessary for blood collection. A flexible schedule is often beneficial when collecting blood from human participants to allow for flexibility in scheduling appointments. Blood collection may take place during a home visit or at a designated location.

### Type of blood collection:

Blood collection can be a collected from different forms including: finger stick (prick), heel prick, ear prick, or venipuncture. Some samples can be stored at room temperature; others must be frozen in a deep freezer. Supplies will also vary widely based on form of data collection.

### Important data collection questions to think through:

- ✓ What type of blood collection approach do I plan to use?
- ✓ How much blood do I need to collect?
- ✓ Will all blood be analyzed or some stored for potential later use?
- ✓ Will participants need to fast? If so, how will that affect collection time and location?
- ✓ What information do I need to provide participants beforehand?
- ✓ How will blood samples be transported and stored?

## Blood Sample Labeling & Storage

Blood samples will need to be labeled with an unidentifiable ID on the freezer label. A master file of participant information and IDs, along with date of collection should be kept securely by someone within the research project to maintain confidentiality.

Blood samples will need to be stored properly such as in a -80° C freezer or shipped immediately in dry ice to a laboratory for proper storage. Check with local shipping facilities for policies and procedures for shipping biohazard materials.

## Supplies You May Need

(for intravenous blood draw)

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- Lab gloves
- Butterfly needles
- LUER-LOK Syringe
- Blood Transfer Vacutainer
- Tourniquets
- Alcohol Pads
- SST tubes (??)
- SST tube rack
- Gauze
- Single Tube Holder
- Ziploc bags
- Clorox wipes
- Absorbent packs
- Needle disposal container
- Insulated Foam Cooler
- Blood Mailer
- Disposable Lab Coats
- Micropore Tape
- Freezer labels for tubes
- Dry ice pellets
- Freezer (-80 degrees) for blood sample storage or
- Packaging for blood samples shipping to laboratory

### *If spinning blood:*

- Cryovials
- Cryovials box
- Pipettes
- Centrifuge

Potential Vendors:

[DIVERSIFIED BIOTECH](#)  
[FISHER SCIENTIFIC](#)