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Collecting a Blood Sample

Collecting blood samples is crucial to the understanding, prevention, and treatment of disease. However, from the patient's perspective, it can also be painful, unnerving, frightening, and inconvenient.

How you draw blood depends at least in part on the nature of the condition being tested for, but most commonly involves inserting a needle into a vein.

What Is Blood Collection And What Are Some Popular Methods Used Today?

Blood collection, or the collection of blood, usually involves the removal of blood and it comes in many different forms. It's also a common term in blood sampling for laboratory analysis.

Three popular methods of blood collection are**:**

1. **Arterial Sampling**
2. **Venipuncture Sampling**
3. **Fingerstick Sampling**

This form of blood collection most commonly takes place within a hospital environment. It is used in the identification of metabolic, respiratory, and mixed acid-base disorders, where

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CO2 levels require understanding or monitoring. While generally safe, the procedure can be upsetting and painful for the patient. There are also several potential contradictions that can affect the site of the collection, such as an abnormal modified Allen test or local infection. There is also an increased risk of bleeding complications in patients with coagulopathy.

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Venipuncture Sampling

Venipuncture is the most common way to collect blood from adult patients. Collection takes place from a superficial vein in the upper limb, generally the median cubital vein; this vein is close to the skin and doesn't have many large nerves positioned close by. This reduces pain and discomfort for the patient.

Venipuncture can take place in a general medical practitioner's office and is often carried out by a trained phlebotomist or nurse. However, its commonality does not equate with it being the best way to collect a blood sample. Many patients find it inconvenient and worrisome. There are also risks related to the storage, transportation, and potential loss or contamination of the blood samples once they are collected. These same concerns also affect the suitability of arterial sampling.

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Fingerstick Sampling

Fingerstick or fingerprick sampling involves taking a very small amount of blood from the patient, usually from the end of a finger. It is over quickly and requires very little in the way of preparation; therefore, reducing concern and anxiety in patients, particularly in children and nervous adults. Patient welfare at the point of collection is not the only reason why this method should be considered the best way to collect a blood sample. The long-term benefits to the patient include the loss of less blood and the ability to carry out testing at home, as a phlebotomist is not required for the procedure.

Arterial and venipuncture sampling are still very common and still have their places in medicine, clinical research, and patient care. However, with advances in technology and greater understanding of blood sampling, fingerstick collection is gaining ground.