

Blood Lead Testing: Collection Made Easy

Susan Spence, R.N., lead free kids

There is often apprehension surrounding the collection of a blood sample from a child for a lead test. Visions of screaming, kicking children can deter even the most dedicated staff! But the process doesn't have to be dreadful. In the *lead free kids* program, we have collected more than 1,500 capillary samples from children ages 12 months to 6 years. We have screened children for lead poisoning in child care settings, elementary schools, WIC clinics, and private homes. We've had some challenges and successes along the way, and would like to share some of what we have learned. Lead tests can be done on either a venous or capillary blood sample. A venous sample is best because there is less chance of contamination by extraneous lead dust, but the reality is that it is much easier to obtain a capillary sample from a child. With careful attention to thorough cleaning of the child's hand and to aseptic technique, a capillary test can be as accurate as a venous test. If a venous sample is desired, some providers will perform a venipuncture in the office, while others will send their patients to the outpatient lab of an area hospital. A capillary sample can be done easily in the office using a simple finger stick. Capillary samples are collected in a vial or on special filter paper that is designed specifically for lead tests. Careful cleaning of the child's hand is a must in either case. The laboratory that processes your lead tests will usually provide the necessary vial or paper.



Blood lead testing at a community health fair

The *lead free kids* program does capillary testing only. Our blood collection device is a vial with a capillary tube unit attached. We have found this to be easiest to use and least likely to become contaminated while dealing with a wiggling child. When using this unit, make sure there is a tight seal between the vial and the tube top. Without a tight seal the blood will not move into the vial properly. It is also important to hold the collection device horizontally and touch the end of the tube to a drop of blood so that the capillary action can draw the blood up the tube. Do not attempt to "scoop" the blood; allow it to flow up the tube by capillary action. Our success in getting an adequate blood flow with a single poke increased dramatically when we began using a springloaded lancet device. There are several styles available; all offer the advantages of a uniform puncture angle and depth, rapid delivery, and better control over the location of the puncture site. Some devices are also designed so that the lancet itself is hidden completely from view--a definite plus when working with children.

No, even with the best technique, not every child will sit quietly while you poke his or her finger; the tears are sure to come. We hope this information will help your experiences with lead testing be as simple and stress-free as possible. We welcome your comments and questions, please feel free to call (801) 534-4588.

Susan Spence, RN, MSN is available for consultation regarding incorporating capillary blood lead testing into medical practices and clinical settings. Call 801-534-4588 for further information.