# Biometric Screening FAQ

1. **What is a biometric screening?**

   A biometric screening is a combination of measurements and readings that can provide valuable information about your health, such as identifying potential risk factors for chronic diseases or conditions like heart disease, hypertension, or diabetes. A biometric screening typically consists of measurement of height, weight and blood pressure and a blood draw to measure glucose and cholesterol levels. KHN has chosen to use the finger stick method for blood draw. A biometric screening is not a diagnostic process and does not replace tests that your personal care provider would perform or the advice and treatment he/she would provide.

2. **Why should I participate?**

   A biometric screening is designed to raise awareness of your health risk factors—to "Know Your Numbers". Most of the risk factors identified through on-site screening events have no symptoms, so participating in this event can help you proactively identify possible risk factors and avoid chronic illness.

   KHN employees and spouses choosing to enroll in the 2018 Engaged PPO Plan must complete a biometric screening by December 8, 2017 in order to receive the reduced Wellness premium.

3. **Who gets my information?**

   Kettering Health Network has contracted with a third party company, Interactive Health, to facilitate biometric screenings. Your results will not be shared with your supervisor or anyone in your management team. The Kettering Health and Welfare Plan may share information with your healthcare and care management providers under the plan, to the extent permitted by law, to provide health care management and/or disease management services including data aggregation for the program improvement and care coordination purposes.

4. **What if I don't agree with the Screening Consent Form?**

   Our vendor is required by law to receive employee consent prior to obtaining confidential medical information. You will need to sign a Screening Consent Form to participate in the screening. If you do not consent, you will not be allowed to participate.

5. **What tests will be performed at the onsite biometric screening event?**

   KHN has contracted with an independent vendor to provide onsite biometric screening services for eligible employees and spouses. The tests do not require fasting, but you'll receive additional biometric values if you choose to fast. Height and weight, calculated BMI, total cholesterol, HDL, LDL, triglycerides, blood glucose, and blood pressure will be measured.

**6. How long will the health screening take?**

The health screening will take approximately 15-20 minutes. The screening process is designed to collect data quickly and efficiently, and provide you with an overview of your results as well as supply some tips to improve your health, if needed. The screening is an opportunity to Know Your Numbers, and helps you to determine if a follow-up visit with your personal care provider is necessary to further discuss your results.

**7. Does the biometric screening replace going to my doctor for an annual physical?**

No. Worksite screenings do not replace a complete preventive annual exam with a physician. It is meant to raise awareness of your biometric values, and to alert you to potential risk factors. You are encouraged to follow-up with your healthcare provider for further advisement or action on any concerns you may have.

**8. My cholesterol was recently tested at my physician's office. Why are my results different now?**

Generally, Total Cholesterol and High Density Lipoprotein (HDL) levels will not vary significantly from day to day. However, there are many factors that affect test results. Variations may be caused by time between blood sample collection, collection technique, blood storage conditions, laboratory transportation factors, and individual patient variables.

Our vendor's screeners are trained to collect and analyze blood samples in accordance with the Cholestech manufacturer's instructions. This minimizes the likelihood that sample collection techniques will impact lipid levels. Some individual variables that affect lipid levels can be controlled, while others cannot. The following is a list of conditions that can affect both venipuncture cholesterol tests, such as those performed at hospitals and physicians' offices, and fingerstick lipid tests:

- **Age –**Cholesterol levels generally rise with age.
- **Within-day variation –** Individuals' serum Cholesterol values can vary 2-3% within the same day.
- **Seasonal variation –** Cholesterol levels vary 3-5% depending on the season. Levels tend to be lower in the summer and higher in the winter. High Density Lipoprotein (HDL) Cholesterol levels follow a similar trend.
- **Diet and alcohol –** Cholesterol levels may rise with increased consumption of saturated fat and calories. Ideally, testing should be performed when a patient has been on their normal diet for the previous two weeks.
- **Exercise –** Regular vigorous exercise affects plasma lipid levels. Exercise lowers the concentration of Triglycerides, Very Low Density Lipoprotein (VLDL) Cholesterol, and Low Density Lipoprotein (LDL) Cholesterol, and raises HDL levels over time. Patients should not engage in vigorous exercise 24 hours prior to being tested.
- **Drugs –** Certain drugs, besides lipid lowering agents, can affect blood lipid levels; for example, some drugs used to treat high blood pressure may increase Triglycerides and decrease HDL levels, while oral estrogens (birth control pills) can lower Total Cholesterol and raise HDL Cholesterol.
- **Posture** – Cholesterol levels can decrease significantly when a person goes from a standing to a sitting or lying down position. There can be a 6% decrease after sitting for

10-15 minutes. The National Cholesterol Education Program (NCEP) recommends that patients should sit quietly for about 5 minutes before the sample is drawn.

- **Fasting –** Total Cholesterol and HDL can be measured in non-fasting individuals, as recent food intake affects Total Cholesterol concentrations less than 1.5%. However, plasma Triglycerides and LDL can increase significantly after eating.
- **Venous occlusion –** While this applies primarily to venipuncture collection, Total Cholesterol concentrations have been found to increase 10-15% after a tourniquet was applied for five minutes. Increases of 2-5% have also been observed after only 2 minutes.
- **Anticoagulants** – Some anticoagulants, such as fluoride, citrate, and oxalate dilute the plasma with water from the red cells in the sample. They can decrease plasma cholesterol levels by up to 10%. Heparin has a negligible effect on cholesterol concentration and EDTA decreases cholesterol and triglyceride levels by about 3%.
- **Recent heart attack or stroke –** Cholesterol and LDL levels fall considerably after a myocardial infarction or stroke and remain low for several weeks. Cardiac catheterization does not seem to have a significant effect on cholesterol levels.
- **Trauma and acute infection –** Cholesterol levels can decrease by as much as 40% after severe trauma and remain depressed for several weeks. Cholesterol levels are also lower for shorter periods in response to severe pain, surgery, and short term physical strain. Acute bacterial and viral infection leads to temporarily altered cholesterol levels which return to the usual levels upon recovery.
- **Pregnancy –** Cholesterol levels can increase by as much as 20-35% during pregnancy due to increases in LDL and VLDL.

**9. I don't agree with some of the numbers, such as my height and blood pressure.**

We often shrink when we get older, and our height may be slightly shorter at the end of the day than at the beginning. This is because the discs in our spine compress throughout the day as we walk, sit, lift, and so on.

A variety of conditions can impact our blood pressure, such as rushing to make your screening appointment, walking up and down the stairs, drinking coffee/tea/soda, stress (even positive stress! ), or room temperature. If your blood pressure measurement at the screening is different than it typically is, mention it to your screener and they will re-measure for you. If it remains the same, please remember the variables that impact blood pressure, and consider the screening an opportunity to learn how your body reacts to them.

**10. How accurate is the fingerstick analysis compared to that performed by a laboratory?**

Results obtained from the Cholestech fingerstick process are comparable to those obtained by reference laboratories. The Centers for Disease Control and Prevention (CDC) established the Cholesterol Reference Method Laboratory Network (CRMLN) to ensure nationwide standardization of lipid measurements consistent with National Education Cholesterol Program (NCEP) goals. Research indicates that blood samples processed by the Cholestech analyzer correlate highly ($r \geq 0.95$) with those processed by a CRMLN laboratory. When Cholestech collection procedures are followed, results are accurate.

**11. Why are my results incomplete?**

Occasionally, the Cholestech analyzer cannot provide results for lipid components or blood glucose. This results in a “Not Available” (N/A) reading. The most common reason for the N/A reading is one or more values falling outside of the Cholestech’s measuring range, detailed below:

- Total Cholesterol: 100 to 500 mg/dL
- HDL: 15 to 100 mg/dL
- Triglycerides: 45 to 650 mg/dL
- Glucose: 50 to 500 mg/dL

There are additional limitations that may result in N/A readings:

- If the measured value of Total Cholesterol or HDL is outside the measuring range, the Cholestech displays N/A for the Total Cholesterol/HDL Ratio.
- If the measured value of Triglycerides is >650, the Cholestech displays N/A for HDL.
- If the measured value of Triglycerides is >400, the Cholestech displays N/A for the LDL estimate.
- If the measured value of Total Cholesterol, HDL, or Triglycerides is outside the measuring range the Cholestech displays N/A for the LDL estimate.

**12. Why did the machine display “Reaction Did Not Occur” when my blood sample was analyzed?**

Sometimes a hematocrit levels affect test results. For example, if a hematocrit level is below 30% (e.g., due to anemia or iron deficiency) or above 52% (e.g., due to dehydration), the Cholestech may have difficulty processing the sample. Also, small sample sizes (<35 µL) may result in “Reaction Did Not Occur” messages.

**13. What if I don’t agree with the reference ranges?**

Our vendor uses current biometric reference ranges and standards from a variety of credible sources. We know that reference points used by healthcare providers can vary. They may even vary within our own network of providers. If you disagree with the ranges used by our vendor you are encouraged to discuss your results with your personal care provider to understand what ranges are right for you based on your personal health history, family health history, prescriptions and other treatment you may be under.