Food Effect Apple Watch User Manual

Food Effect Apple Watch is a food sensitivity test based on Dr. Aurthur Coca's Pulse Test. For some insight into the origins and science of the pulse test, please refer to our white paper "Food Sensitivity Testing with Food Effect".

Most people are consuming foods which, while they do not cause overt allergic reactions, do cause low level reactions that contribute to inflammation. Continuous consumption of these offending foods can promote chronic inflammation which can lead to other health problems.

In a nutshell, the Coca Pulse Test uses your morning heart rate before rising and compares this to your heart rate after eating. If your pulse increases more than 16 beats above your morning pulse within 90 minutes of the meal (with no exercising during this time!) then you **may** have eaten something your body is sensitive to.

Food Effect Apple Watch

The Food Effect Apple Watch app is the easiest way to detect food sensitivities! It uses the heart rate automatically recorded from the Apple Watch, so all you have to do is let the app know when you start and end a meal, then sit quietly while working, reading, watching TV or relaxing for 90 minutes as your post meal heart rate is collected.
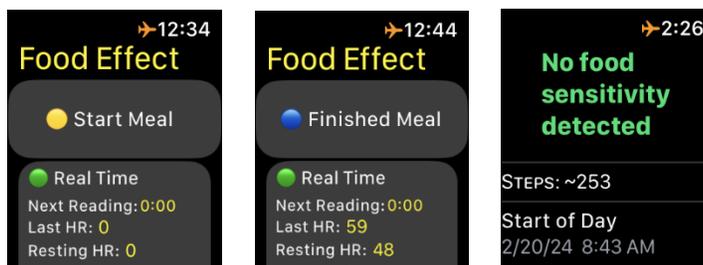
The heart rate collected during the session is compared to your heart rate in the morning before rising. To collect this morning heart rate, we recommend one of the following methods:

- Charge your watch before bed and wear your watch to sleep. Your heart rate measured before your first step in the morning will be used as your morning reference heart rate.

OR

- If you charge your watch at night and don't want to sleep in it, put your watch on before getting out of bed and manually start a heart rate reading.
  - This can be done by selecting any watch face with the Heart Rate [complication](link). The "Activity" watch face generally has the Heart Rate complication included.
  - Simple touch the heart rate complication (the little heart in upper left corner of activity watch face below) and your heart rate will be recorded.
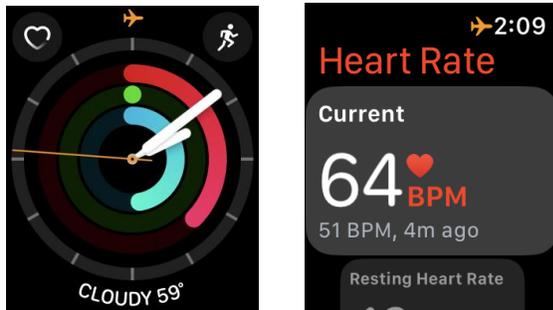
Important! Because smoke and alcohol change the pulse for most people it is advised to avoid smoking and drinking the day before and day of food testing or at least do not smoke for an hour before testing.

Also, please be aware that an elevated pulse form exercise can also invalidate the readings so be sure your heart rate has recovered from exercise or excessive movement before testing. If your heart rate is elevated when you start your meal, you will get a warning as described below.

That's it! Food Effect Apple Watch is the simplest way to discover foods that could be compromising your health.

Getting Started

The first time (and only the first time, unless you delete the app and reinstall) you open FoodEffect on your Apple Watch you will be asked a series of questions. The first is for permission to access your health data from the apple health app. Note: We only access **heart rate, stand information and steps**. When you see the screen scroll down and select "Review".
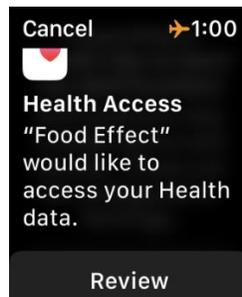
You will be directed to the screen to allow the app read access to the above health information. Please select "All Requested Data Below", then scroll down and select "Done".
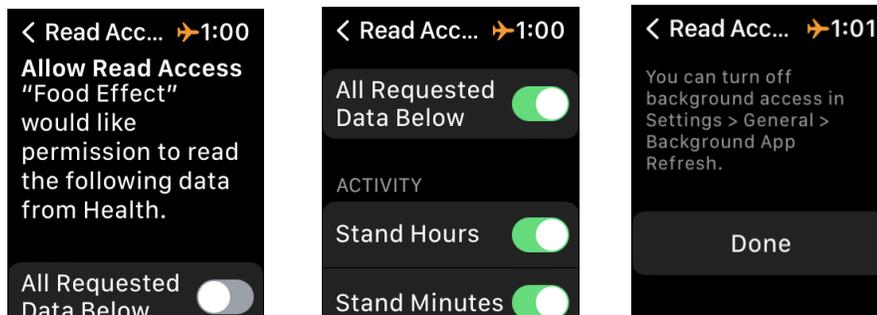
Next, please allow FoodEffect to send you notifications. These include finished meal and end of meal test reminders.
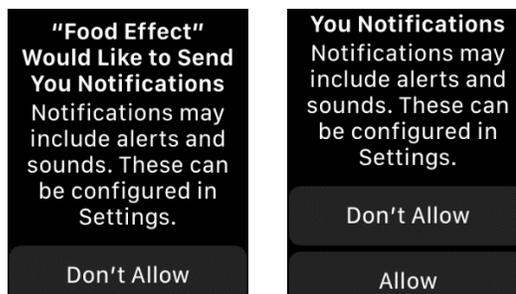
You will then be directed to the QuickStart Guide. We encourage you to take a minute to read it and at the bottom of the QuickStart guide select "Done". You will then be presented with our Disclaimer. Please read and agree before you use the app.
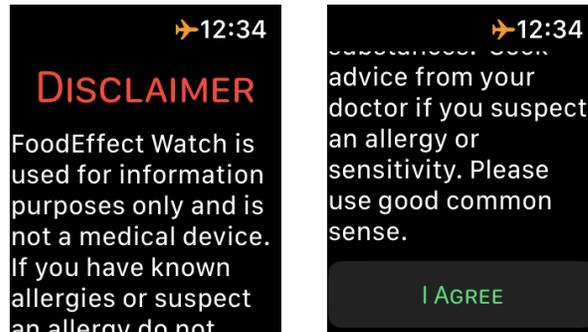
Food Testing

Now that the paperwork is out of the way, you are ready to start testing! If you happened to have slept with your watch the night before you can start right away, otherwise please obtain your morning pulse by one of the two methods described above. Because your post meal pulse is compared to your morning pulse to determine possible food sensitivities, it is crucial to get the morning pulse right.

It's Time to Test!

Open FoodEffect and select "Start Meal". The app will gather the most recent heart rate from the Apple Health App, then return to the main screen where you can select "Finished Meal" when you are done eating.

If, at the start of your meal, your heart rate is elevated more than 16 beats greater than your morning pulse (for example you just worked out or walked up a flight of stairs) the app will issue a warning.
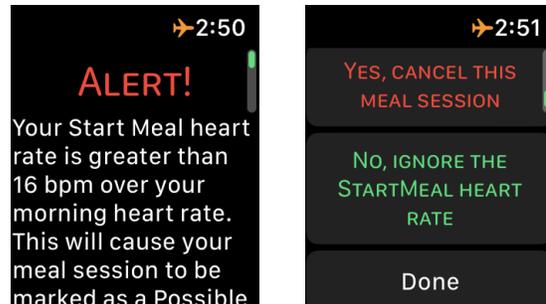
You can continue the meal or cancel. This will not affect the results as long as your heart rate settles down to normal while you eat. Remember, the app compares your post meal heart rate to your morning pulse.

Once you have finished eating and pressed the "Finished Meal" button it is best to be sitting, standing or lying down for the next 90 minutes. Walking around and posture changes, such as standing up, increases the heart rate and thus affects the results. **FoodEffect can manage some movement during the test period though we recommend trying to stay put. For this reason, we recommend a trip to the restroom or to get some water before selecting "Finished Meal".**

If after 30 minutes "Finished Meal" has not been selected, the app (assuming you enabled notifications) will alert you and ask if you have finished your meal. You can select the appropriate response.
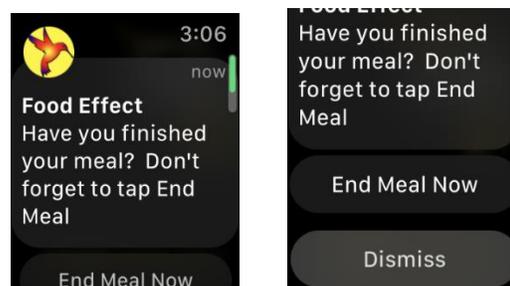
Once you have successfully "Finished Meal" the countdown begins. The app displays the status of the 90-minute timer as well as other data from the health app, your start meal and finished meal heart rates. Reminder: do your best to stay seated during this time!
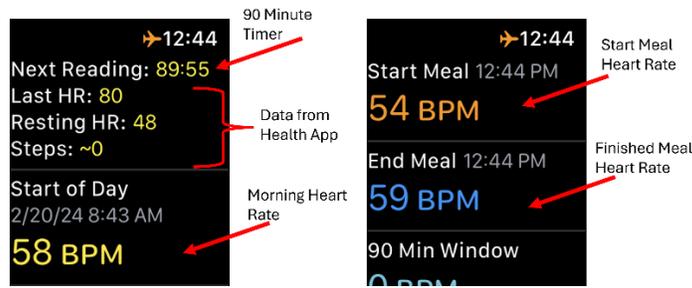
At the end of the 90 minutes, assuming you have enabled alerts, you will be notified that the session is complete and will be asked if you would like to open the app. Select "Open App" to see your results!
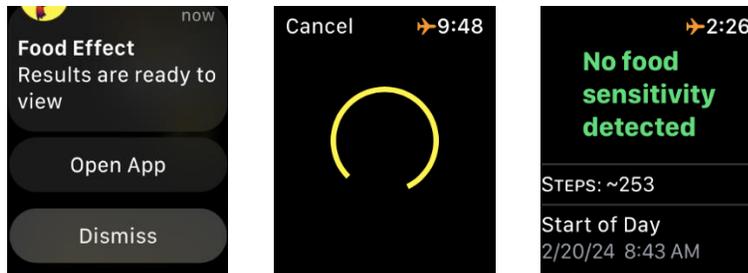
Note: in the results it will show you how many steps you took during the 90-minute session. If your heart rate spiked during this time, it could be due to getting up quickly and moving around.

From the results screen, scroll down and see your maximum heart rate at the end of the 90-minute window and what time that heart rate was selected. In addition, it displays a bar chart of various heart rates during the session (you can scroll left to see them all). We do have algorithms that accommodate some walking and standing movement as long as it is minor. In this example you can see the heart rate temporarily spiked to 68. This will be ignored by our algorithm.
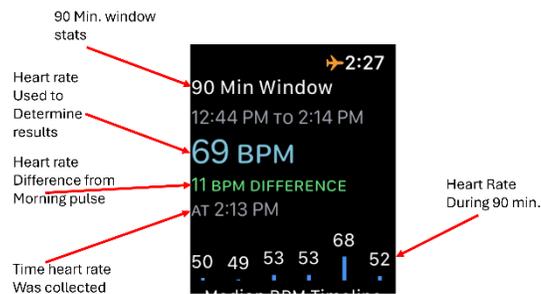
The previous example shows a session that did not detect a food sensitivity. If a sensitivity is detected, you will see your results screen as shown below. You can check all of the above information in the same way. In this example 66 BPM represents 16 beat per minute difference from the morning pulse and was detected at 2:31 PM.
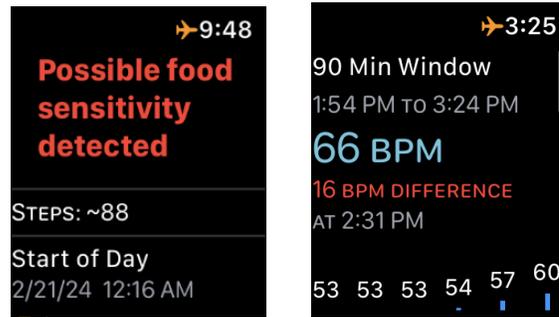
Next Steps

In the event you showed a possible food sensitivity, please be sure to log or write down everything you consumed, including food and drink. Your next steps will be to test each item individually to determine what you are sensitive to.

For example, one of our customers had eaten a homemade protein bar and a handful of raw organic cashews and tested positive for a possible food sensitivity. Since cashews are on the common suspect list (see suspect food section below), she tested a cashew only snack the next day and tested positive, thus isolating the offending food.

Note: many who are sensitive to one type of nut may very well be sensitive to other nuts. This same customer then tested pistachios and almonds and found sensitivities to both. With further investigation, she discovered that she could eat a few almonds (< 20) without invoking a reaction whereas any pistachios or cashews caused her heart rate to increase.

Common Foods for Sensitivities

Although any food can cause a reaction, the FDA suggests that nine foods account for around 90% of all food reactions. These foods include:

- Cow's Milk
  - Milk Powder
  - Cheese
  - Butter
  - Margarine
  - Yogurt
  - Cream
  - Ice Cream
- Eggs
- Tree Nuts
  - Brazil Nuts
  - Almonds
  - Cashews
  - Macadamia Nuts
  - Pistachios
  - Pine Nuts
  - Walnuts
- Peanuts
- Shellfish
  - Shrimp/Prawns
  - Crayfish
  - Lobster
  - Squid
  - Scallops
- Wheat
- Soy
- Fish
- Sesame

Additional FoodEffect Apple Watch Features

On the main screen that includes the "Start Meal" button, there are other features that can be selected by scrolling down. These include:

- Cancel Meal
- Last Meal
- Meal History
- HR History
- Settings
- Manual
- Quick Start
- Stats

Cancel Meal, Last Meal, Meal History

If, for whatever reason, you decide to cancel your food test session, simply scroll down on the main screen and select "Cancel Meal". If you are currently on the session screen that shows your start and finished meal heart rates, scroll to the bottom and select "Done" to go to the main screen where you can then select "Cancel Meal".
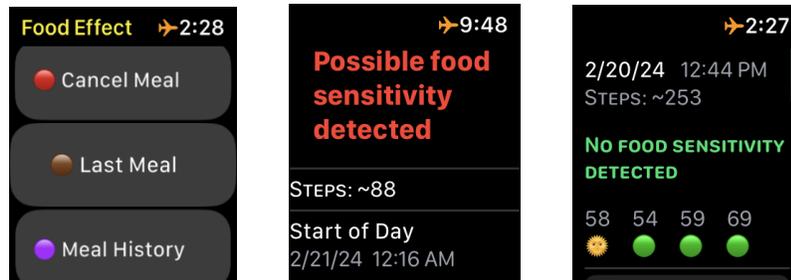
To look at the full session screen from your last meal, select the "Last Meal" button for the information. For a summary of past meals, select "Meal History" and you will see a snapshot of previous meals.

Heart Rate History and Settings

FoodEffect collects heart rate data from the Apple Health app. The heart rate values and the time they were measured can be examined by selecting the "Heart Rate History" button. The "Settings" button offers you a the ability to enable and disable audible notifications from the Settings screen.

Manual Test Mode

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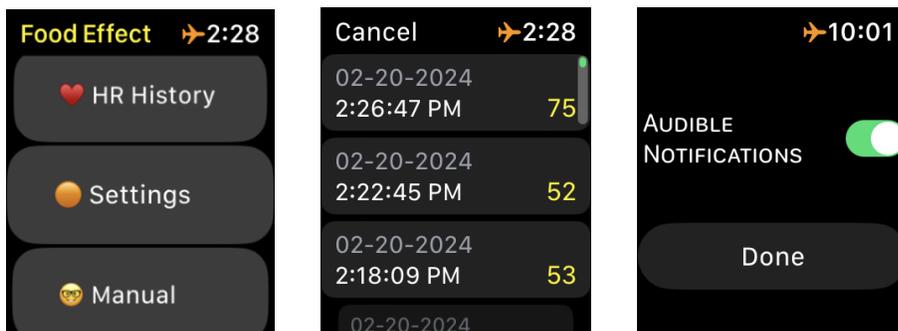
FoodEffect Apple watch offers a manual test mode that lets you test a meal after the fact. Note: you still need to obtain your morning pulse as previously described however if you forgot to "Start Meal" simply scroll down on the main screen and select the "Manual" button. You will be prompted to enter the date and the time of your meal start and meal end.
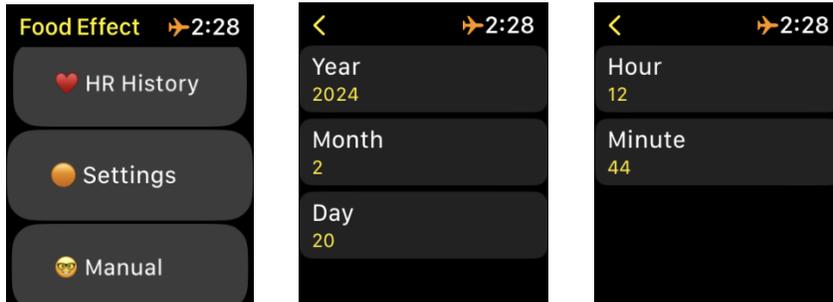
FoodEffect Watch will query your Apple Health information and will analyze the heart rate from the past date and time and provide your result. This is handy if you had planned to test a meal and forgot to start the session.

QuickStart and Stats

FoodEffect Watch has a Quickstart Guide to get you up and running in no time! The Stats screen provides information most people won't care about though check it out if you are curious!