

# Food Sensitivity Testing

## Information for Patients



### FOOD ALLERGY OR FOOD SENSITIVITY?

On exposure to foods, the immune system can react by releasing proteins called antibodies. Foods that cause antibodies to be released are called antigens or allergens. Two types of antibodies are commonly produced in response to foods: IgE (immunoglobulin E) and IgG (immunoglobulin G). Food allergies and food sensitivities differ by the type of antibody produced and the speed of the reaction. Food allergy is an immediate reaction caused by the production of IgE antibodies, while food sensitivity is a delayed reaction caused by the production of IgG antibodies to specific foods.

**Food Allergy IgE Reactions - Immediate:** IgE reactions generally occur within minutes of eating a reactive food and can, on rare occasions, be life-threatening (e.g. peanut allergies). Skin eruptions (hives, eczema), breathing and digestive problems are also common IgE reactions. After first time exposure to an allergen, the body remembers what the allergen “looks like” and keeps a supply of IgE ready for immediate release if it “sees” that allergen again. Referral to a specialist is recommended in the case of serious food allergies (i.e. difficulty breathing, anaphylaxis).

**Food Sensitivity IgG Reactions - Delayed:** IgG reactions take hours or days to develop, making it difficult to determine the food cause without testing. In an IgG reaction, the IgG antibodies attach themselves to the antigen and create an antibody-antigen complex. These complexes are normally removed by special cells called macrophages. However, if the complexes are present in large numbers and the food antigen is still being consumed, the macrophages are unable to remove all the complexes. The antigen-antibody complexes accumulate and can be deposited in body tissues. Once deposited in tissue, these complexes may cause inflammation, which can contribute to a variety of health conditions.

### CONDITIONS ASSOCIATED WITH FOOD SENSITIVITIES

**Digestive disorders:** Conditions like irritable bowel syndrome (IBS) and Crohn's disease have been linked to IgG food reactions. Research has shown that elimination of IgG reactive foods can alleviate IBS symptoms.

**Migraines:** A 2007 research study found that 43/65 patients with migraine headaches had complete remission of headaches after one month of eliminating reactive foods. Another study in 2010 found a significant reduction in the number of headache days and migraine attacks with elimination of reactive foods.

**Mood/attention deficit disorders:** Deposition of antibody-antigen complexes in nervous system tissues may contribute to hyperactivity, depression, anxiety, inability to concentrate and other mood disorders. There is some evidence that eliminating IgG reactive foods can improve attentiveness in children.

**Weight gain:** Antibody-antigen complexes in tissue cause inflammation, which leads to fluid retention and weight gain. To fight inflammation, the body releases a chemical called ghrelin, which also happens to be an appetite stimulant. Thus, IgG food reactions may contribute to weight gain in two ways: fluid retention and increased appetite.

### DELAYED FOOD REACTIONS

Delayed food reactions are IgG antibody reactions (food sensitivities) that occur hours to days after a food is consumed. The inflammatory reaction triggered by antibody-antigen complexes may have the following effects:

#### Systemic

Fever, fatigue, chills, sweating and feeling weak, puffiness.

#### Skin

Itching, redness, swelling, and rashes.

#### Brain

Mood and memory disturbances, behavioural problems.

#### Lungs

Food-induced bronchitis and asthma symptoms.

#### Musculoskeletal

Joint pain, muscle stiffness and swelling.

# Food Reactions

## WHY TEST FOOD SENSITIVITIES?

Take the guesswork of your diet. Since hours or days can pass between the time a reactive food is consumed and occurrence of symptoms, testing is often the only way to determine which foods are responsible for the reaction.

- IgG reactions frequently occur to commonly consumed foods such as dairy, wheat, eggs, yeast, pork and soy.
- Elimination diets (remove suspect foods for a period of time and then reintroduce and check for reactions) are difficult to follow and can take months to complete.

## TEST RESULTS

A sample LifeLabs FST™ report appears at right. Each antigen has its own unique reference interval. These were derived by studying many samples across a broad population. A threshold is given that represents the threshold between normal (green) result, borderline (yellow) or elevated (red). These are illustrated as black bars with the numerical values in black. These were determined by examining the results across a Canadian population. A borderline or elevated reaction does not mean that any patient is assured to have symptoms, but that there is a level of reaction that is higher than what is typical in the population. Your healthcare professional is best qualified to help you interpret the meaning of your results.

## ELIMINATING REACTIVE FOODS

Once you receive your results, your healthcare professional will help you formulate a plan to eliminate the problem foods from your diet. Most people see improvement of symptoms within a few weeks of eliminating the reactive foods. However, it is important to understand that symptom improvement may take some time, and results vary from individual to individual. Removing reactive foods from the diet can sometimes result in withdrawal symptoms like headaches, tiredness, irritability and hunger.

## HOW “LEAKY GUT” CONTRIBUTES TO FOOD REACTIONS

Leaky gut syndrome is caused by inflammation in the gut lining. Inflammation can be caused by food allergies or sensitivities, abnormal gut flora, stress, certain drugs, and alcohol. An inflamed gut lining causes more food particles to leak into the bloodstream where they may come in contact with food-specific immunoglobulins. Therefore, a test report that shows multiple food reactions to foods regularly eaten may be an indication of leaky gut. If so, your healthcare professional may suggest treatments for your digestive system in addition to dietary changes.

## UNEXPECTED RESULTS

- If you have not eaten a particular food for many months, you are less likely to have circulating antibodies to that food. In that case, a lack of reaction is most probably due to lack of exposure and does not necessarily mean the food is non-reactive.
- Sometimes reactions appear for foods seldom or never eaten. For example: a child reacting to coffee. This may be due to cross-sensitivity with a related food, or may result from inadvertent exposure to that food (hidden ingredient in packaged food item or sauce). Elevated IgG may also have a role in protecting against more serious IgE reactions. It's important to understand that having elevated IgG antibodies is not a concern if the reactive food is rarely eaten.
- Non-immune food reactions: Food reactions can also arise from a lack of digestive enzymes or stomach acid, chemicals naturally present in food and artificial additives. For example: lactose intolerance is due to lactase enzyme deficiency; histamine is found in wine, cheese, spinach and tomatoes; and MSG is an additive that can produce symptoms in some people. These are not immune reactions, and therefore will not result in antibody production.
- Food reactions can also arise from previous negative experiences with a specific food (e.g. food poisoning), in that physical reactions to subsequent exposures are possible.



# LifeLabs FST™ Antigen List

Category	LifeLabs FST™ Basic+			LifeLabs FST™ Enhanced+ <i>Everything in the Basic+ panel, plus</i>		
<b>Vegetables</b>	<ul style="list-style-type: none"> <li>• Beetroot</li> <li>• Broccoli</li> <li>• Butterhead lettuce</li> <li>• Carrots</li> <li>• Celeriac</li> <li>• Chili</li> </ul>	<ul style="list-style-type: none"> <li>• Cucumber</li> <li>• Eggplant</li> <li>• Kohlrabi</li> <li>• Lamb's lettuce</li> <li>• Leek</li> <li>• Olive</li> <li>• Onion</li> </ul>	<ul style="list-style-type: none"> <li>• Potato</li> <li>• Red cabbage</li> <li>• Sweet pepper</li> <li>• Tomato</li> <li>• Zucchini</li> </ul>	<ul style="list-style-type: none"> <li>• Artichoke</li> <li>• Arugula</li> <li>• Asparagus</li> <li>• Bok Choi</li> <li>• Brussels sprouts</li> <li>• Cauliflower</li> </ul>	<ul style="list-style-type: none"> <li>• Celery</li> <li>• Chard</li> <li>• Endive</li> <li>• Fennel</li> <li>• Iceberg lettuce</li> <li>• Parsnip</li> </ul>	<ul style="list-style-type: none"> <li>• Pumpkin</li> <li>• Radish</li> <li>• Savoy cabbage</li> <li>• Spinach</li> <li>• Sweet potato</li> <li>• White cabbage</li> </ul>
<b>Fruits</b>	<ul style="list-style-type: none"> <li>• Apple</li> <li>• Apricot</li> <li>• Banana</li> <li>• Cherry</li> <li>• Grape</li> </ul>	<ul style="list-style-type: none"> <li>• Kiwi</li> <li>• Lemon</li> <li>• Nectarine</li> <li>• Orange</li> <li>• Pineapple</li> </ul>	<ul style="list-style-type: none"> <li>• Raspberry</li> <li>• Strawberry</li> <li>• Watermelon</li> </ul>	<ul style="list-style-type: none"> <li>• Avocado</li> <li>• Blackberry</li> <li>• Blueberry</li> <li>• Cranberry</li> <li>• Currant</li> <li>• Date</li> <li>• Fig</li> </ul>	<ul style="list-style-type: none"> <li>• Grapefruit</li> <li>• Guava</li> <li>• Lime</li> <li>• Lychee</li> <li>• Mandarin</li> <li>• Mango</li> <li>• Mulberry</li> </ul>	<ul style="list-style-type: none"> <li>• Papaya</li> <li>• Peach</li> <li>• Pear</li> <li>• Plum</li> <li>• Pomegranate</li> <li>• Rhubarb</li> </ul>
<b>Dairy Products &amp; Eggs</b>	<ul style="list-style-type: none"> <li>• Cow's milk</li> <li>• Egg white</li> <li>• Egg yolk</li> </ul>	<ul style="list-style-type: none"> <li>• Fermented dairy</li> <li>• Goat dairy</li> <li>• Rennet</li> </ul>	<ul style="list-style-type: none"> <li>• Sheep dairy</li> </ul>	<ul style="list-style-type: none"> <li>• Quail egg</li> </ul>	<ul style="list-style-type: none"> <li>• Ricotta</li> </ul>	
<b>Gluten-free Grains</b>	<ul style="list-style-type: none"> <li>• Buckwheat</li> <li>• Corn</li> </ul>	<ul style="list-style-type: none"> <li>• Millet</li> <li>• Oats</li> </ul>	<ul style="list-style-type: none"> <li>• Quinoa</li> <li>• Rice</li> </ul>	<ul style="list-style-type: none"> <li>• Amaranth</li> <li>• Cassava</li> </ul>	<ul style="list-style-type: none"> <li>• Lupini bean</li> <li>• Teff</li> </ul>	
<b>Grains Containing Gluten</b>	<ul style="list-style-type: none"> <li>• Barley</li> <li>• Gluten</li> </ul>	<ul style="list-style-type: none"> <li>• Rye</li> <li>• Spelt</li> </ul>	<ul style="list-style-type: none"> <li>• Wheat</li> </ul>			
<b>Mushrooms</b>	<ul style="list-style-type: none"> <li>• Meadow mushrooms</li> </ul>	<ul style="list-style-type: none"> <li>• Oyster mushrooms</li> </ul>		<ul style="list-style-type: none"> <li>• Chanterelle</li> </ul>	<ul style="list-style-type: none"> <li>• Porcini mushroom</li> </ul>	<ul style="list-style-type: none"> <li>• Shiitake</li> </ul>
<b>Seeds, Legumes &amp; Nuts</b>	<ul style="list-style-type: none"> <li>• Almond</li> <li>• Cashew</li> <li>• Cocoa bean</li> <li>• Flax</li> <li>• Green bean</li> </ul>	<ul style="list-style-type: none"> <li>• Hazelnut</li> <li>• Pea</li> <li>• Peanut</li> <li>• Pistachio</li> <li>• Poppy seeds</li> </ul>	<ul style="list-style-type: none"> <li>• Pumpkin seeds</li> <li>• Sesame</li> <li>• Soybean</li> <li>• Sunflower seeds</li> <li>• Walnut</li> </ul>	<ul style="list-style-type: none"> <li>• Brazil nut</li> <li>• Broad bean</li> <li>• Chia seeds</li> <li>• Chickpeas</li> </ul>	<ul style="list-style-type: none"> <li>• Coconut</li> <li>• Kidney bean</li> <li>• Lentil</li> <li>• Macadamia nut</li> </ul>	<ul style="list-style-type: none"> <li>• Mung bean</li> <li>• Pine nut</li> <li>• Sweet chestnut</li> <li>• White beans</li> </ul>
<b>Spices &amp; Herbs</b>	<ul style="list-style-type: none"> <li>• Basil</li> <li>• Cinnamon</li> <li>• Curry</li> <li>• Garlic</li> <li>• Horseradish</li> </ul>	<ul style="list-style-type: none"> <li>• Mustard seed</li> <li>• Nutmeg</li> <li>• Oregano</li> <li>• Paprika</li> <li>• Parsley</li> </ul>	<ul style="list-style-type: none"> <li>• Pepper, black</li> <li>• Rosemary</li> <li>• Thyme</li> <li>• Vanilla</li> </ul>	<ul style="list-style-type: none"> <li>• Bay leaf</li> <li>• Black cumin</li> <li>• Capers</li> <li>• Caraway</li> <li>• Cardamom</li> </ul>	<ul style="list-style-type: none"> <li>• Chive</li> <li>• Clove</li> <li>• Coriander</li> <li>• Cumin</li> <li>• Garden cress</li> </ul>	<ul style="list-style-type: none"> <li>• Ginger</li> <li>• Marjoram</li> <li>• Saffron</li> <li>• Sage</li> </ul>
<b>Miscellaneous</b>	<ul style="list-style-type: none"> <li>• Aspergillus niger</li> <li>• Black tea</li> <li>• Candida albicans</li> </ul>	<ul style="list-style-type: none"> <li>• Cane sugar</li> <li>• Coffee</li> <li>• Guar flour</li> </ul>	<ul style="list-style-type: none"> <li>• Honey</li> <li>• Peppermint</li> <li>• Yeast</li> </ul>	<ul style="list-style-type: none"> <li>• Camomile</li> <li>• Carob bean</li> </ul>	<ul style="list-style-type: none"> <li>• Ginkgo biloba</li> <li>• Green tea</li> </ul>	<ul style="list-style-type: none"> <li>• Nori</li> <li>• Wakame</li> </ul>
<b>BELOW ARE NOT INCLUDED in the <i>LifeLabs FST™ Vegetarian+ panel</i></b>						
<b>Fish &amp; Seafood</b>	<ul style="list-style-type: none"> <li>• Cod</li> <li>• Crayfish</li> <li>• Lobster</li> </ul>	<ul style="list-style-type: none"> <li>• Ocean perch</li> <li>• Pollock</li> <li>• Salmon</li> </ul>	<ul style="list-style-type: none"> <li>• Tuna</li> </ul>	<ul style="list-style-type: none"> <li>• Anchovy</li> <li>• Barnacle</li> <li>• Carp</li> <li>• Crab</li> <li>• Flounder</li> <li>• Gilthead bream</li> <li>• Haddock</li> <li>• Herring</li> </ul>	<ul style="list-style-type: none"> <li>• Mackerel</li> <li>• Monkfish</li> <li>• Mussels</li> <li>• Octopus</li> <li>• Oysters</li> <li>• Pike</li> <li>• Sardine</li> <li>• Scallop</li> </ul>	<ul style="list-style-type: none"> <li>• Sea bass</li> <li>• Shrimp, prawn</li> <li>• Squid/cuttlefish</li> <li>• Swai fish</li> <li>• Trout</li> <li>• Turbut</li> <li>• Zander</li> </ul>
<b>Meat</b>	<ul style="list-style-type: none"> <li>• Beef</li> <li>• Chicken</li> </ul>	<ul style="list-style-type: none"> <li>• Lamb</li> <li>• Pork</li> </ul>	<ul style="list-style-type: none"> <li>• Turkey</li> </ul>	<ul style="list-style-type: none"> <li>• Duck</li> <li>• Goat</li> <li>• Goose</li> </ul>	<ul style="list-style-type: none"> <li>• Ostrich meat</li> <li>• Rabbit/hare</li> <li>• Roe deer</li> </ul>	<ul style="list-style-type: none"> <li>• Veal</li> <li>• Wild boar</li> </ul>

# Which LifeLabs FST™ Panel Is Right for You?



You've decided to do an IgG food Sensitivity test, now it's time to select a panel that will give you a report of the foods that are most relevant to you and the best value for your money. There are three panel options including Candida, available to meet your needs:

## LIFELABS FST™ BASIC+

**101 FOODS:**  
vegetarian; eggs and dairy;  
meat and seafood.

## LIFELABS FST™ VEGETARIAN+

**166 FOODS:**  
vegetarian; eggs and dairy

## LIFELABS FST™ ENHANCED+

**211 FOODS:**  
vegetarian; eggs and dairy

## WHEN TO SELECT LIFELABS FST™ ENHANCED

Below is a list of the foods that are available only through the LifeLabs FST™ Enhanced+ panel. Using this list, check all foods you consume regularly. If you select four or more foods from the list, the LifeLabs FST™ Enhanced+ panel is the best option of you to ensure you're getting a report of the foods that are most relevant to you and the best value for your money.

### Fish and seafood

- Anchovy
- Barnacle
- Carp
- Crab
- Flounder
- Gilthead bream
- Haddock
- Herring
- Mackerel
- Monkfish
- Mussels
- Octopus
- Oysters
- Pike
- Sardine
- Scallop
- Sea bass
- Shrimp, prawn
- Squid/cuttlefish
- Swai fish
- Trout
- Turbut
- Zander

### Fruit

- Avocado
- Blackberry
- Blueberry
- Cranberry
- Currant
- Date
- Fig
- Grapefruit
- Guava
- Lime
- Lychee
- Mandarin
- Mango
- Mulberry
- Papaya
- Peach
- Pear
- Plum
- Pomegranate
- Rhubarb

### Vegetables

- Artichoke
- Arugula
- Asparagus
- Bok Choi
- Brussels sprouts
- Cauliflower
- Celery
- Chard
- Endive
- Fennel
- Iceberg lettuce
- Parsnip
- Pumpkin
- Radish
- Savoy cabbage
- Spinach
- Sweet potato
- White cabbage

### Dairy/Eggs

- Quail egg
- Ricotta

### Herbs/Spices

- Bay leaf
- Black cumin
- Capers
- Caraway
- Cardamom
- Chive
- Clove
- Coriander
- Cumin
- Garden cress
- Ginger
- Marjoram
- Saffron
- Sage

### Mushroom

- Chanterelle
- Porcini mushroom
- Shiitake

### Nuts/Seeds

- Brazil nut
- Broad bean
- Chia seeds
- Chickpeas
- Coconut
- Kidney bean
- Lentil
- Macadamia nut
- Mung bean
- Pine nut
- Sweet chestnut
- White beans

### Gluten free grains

- Amaranth
- Cassava
- Lupini bean
- Teff

### Meat

- Duck
- Goat
- Goose
- Ostrich meat
- Rabbit/hare
- Roe deer
- Veal
- Wild boar

### Miscellaneous

- Camomile
- Carob bean
- Ginkgo biloba
- Green tea
- Nori
- Wakame

# Food Reintroduction Symptoms Tracker



- Remove the foods that are reactive, following your Healthcare Provider’s guidance and advice.
- Track your symptoms, and if they have improved, you may want to test yourself for reactions by slowly reintroducing foods into your diet. Consult with your Healthcare Provider before doing this.
- Choose one test food to reintroduce into your diet at a time.
- Using the tracker below, take detailed notes on how you feel, and make a point to notice everything you’re feeling.

	Day 1	Day 2	Day 3	Day 4	Day 5
<b>Time</b>					
<b>Food</b>					
<b>Digestion/ Bowel Function</b>					
<b>Joint/Muscle Aches</b>					
<b>Headache/ Pressure</b>					
<b>Nasal or Chest Congestion</b>					
<b>Kidney/ Bladder Function</b>					
<b>Skin</b>					
<b>Energy Level</b>					
<b>Sleep</b>					
<b>Other Symptoms</b>					