

EAT BETTER

LIVE BETTER

FEEL BETTER



CONTENT

Page

04

Food Intolerance

Page

05

Difference between
Food Allergy and
Food Intolerance

Page

06

Allergy Tests

Page

08

Allergen Test Menu

Page

10

Causes of Food Intolerance

Page

12

Lactose Intolerance

Page

13

Food Intolerance Panel

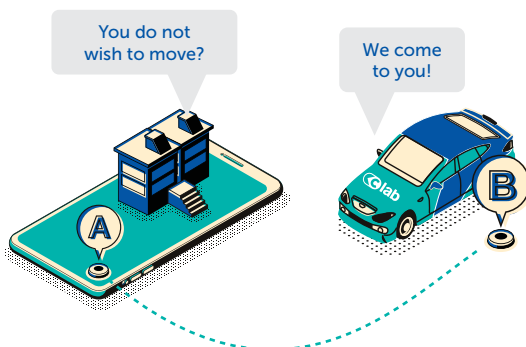




ABOUT C-LAB

C-Lab regroups our laboratory services available at C-Care Darné, C-Care Wellkin, C-Care Grand Baie and C-Care Tamarin. Our labs are ISO accredited and deliver reliable and accurate test results in a timely manner to help doctors in their diagnosis. C-Lab also offers convenience through a network of collection centres.

We also provide home collection services for people who are unable to come to the laboratory.





WHAT IS FOOD INTOLERANCE?

If you experience food intolerance, it means your body has an abnormal reaction to certain food or food types that makes them hard for you to digest. There are a number of reasons why this might happen but the most common is the lack of the correct enzymes for proper digestion.

It is estimated that about 20% of the population may be affected by some kind of food intolerance. While it is not life threatening, food intolerances can be uncomfortable and, if left untreated, could lead to chronic medical conditions.

WHAT IS FOOD ALLERGY ?

A food allergy is a specific immune response triggered by consuming certain food. When someone with a food allergy eats a particular food, their immune system mistakenly identifies the food as harmful and releases chemicals, such as histamines, to defend against it. These chemicals cause allergic reactions, which can range from mild symptoms, such as hives or an itchy mouth, to severe reactions known as anaphylaxis, which can be life-threatening.



DAIRY FREE



GLUTEN FREE



EGG FREE



NUT FREE



SUGAR FREE

Difference between food allergy and food intolerance

FOOD ALLERGY	VS	FOOD INTOLERANCE
Typically a fast onset within minutes but can take up to several hours	 HOW FAST?	Not always immediate, can take up to several hours, days or even months after food consumption.
Rash Hives Itchy Skin Breathing difficulties Swelling Trouble Swallowing Chest Pain Nausea Diarrhoea Vomiting	 SYMPTOMS	Gas Cramps Bloating Heartburn Headaches Irritability Nausea Diarrhoea Vomiting
Allergic reactions can be severe or life threatening if not treated. It affects the immune system even when food is taken in small amount.	 SEVERITY	Mostly mild and not life threatening. It affects the digestive system.

ALLERGY TESTS

Allergy tests are done to determine whether your immune system overreacts to certain substances called allergens. Allergy tests will help to identify the source of an allergic reaction.

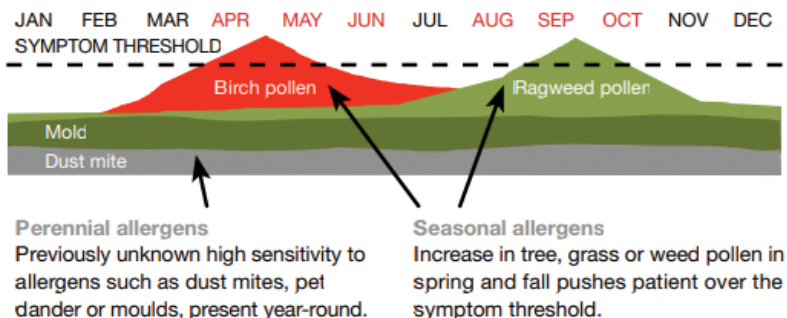
Common types of allergens include:



- Animal products: pet dander, dust mite waste and cockroaches.
- Food: Wheat, nuts, milk, shellfish and egg allergy.
- Insect stings: Includes bees, wasps and mosquitoes.
- Mold: Airborne spores from mold can trigger a reaction.
- Plants: Pollen from grass, weed and trees.
- Other allergens: Latex, often found in latex gloves and condoms, metals like nickel.

Determination of total IgE concentration is useful as an aid in the diagnosis of allergic diseases.

Based on the principle of the enzyme immunoassay, allergy testing is designed for the detection of specific allergen-related IgE antibodies in serum.





Common allergy symptoms include:

- Sneezing and an itchy, runny or blocked nose.
- Itchy, red, watering eyes.
- Wheezing, chest tightness, shortness of breath and cough.
- Raised, itchy and red rash (Hives).
- Swollen lips, tongue, eyes or face.
- Tummy pain, feeling sick, vomiting or diarrhoea.
- Dry, red and cracked skin.

Food allergy symptoms typically occur within 30 minutes of food ingestion but may also occur up to two hours after ingestion.



Allergies are one of the most common chronic conditions worldwide, affecting around 30% of adults and up to 40% of children ? This includes a wide range of allergic conditions, such as allergic rhinitis (hay fever), asthma, food allergies, atopic dermatitis (eczema), and more. Allergies can have a significant impact on quality of life and can lead to complications such as asthma attacks, anaphylaxis, and sinusitis. Early diagnosis and appropriate management can help prevent or reduce the severity of allergic reactions.



- Nasal congestion/sneezing, itchy/watery eyes and nose:
- **65%** of patients prescribed antihistamines for their reported allergic rhinitis have symptoms that are not due to allergy.
- Wheezing, coughing, breathing problems:
- **90%** of children and **60%** of adults with asthma have allergy.
- Dry skin, pruritus, scratching:
- **30-70%** infants and young children with eczema have underlying allergy.

Allergy Test Panels

Food Allergy Panel (Quantitative)

Hazelnut
Peanut
Walnut
Almond
Milk
Egg white
Egg yolk
Casein
Potato
Carrot
Celery
Tomato
Cod
Crab
Orange
Apple
Wheat Flour
Rye Flour
Sesame
Soya bean

Perrenial Allergy Panel (Quantitative)

Derm.pteronyssinus
Derm.farinae
Alder
Birch
Hazel
Oak
Grass mix
Rye (pollen)
Dog
Alternaria alternata
Mugwort
Plantain
Cat
Horse
Dog
Hamster
Rabbit
Penicillium notatum
Cladospor.herbarum
Aspergillus fumigatus
Alternaria alternata

Atopic panel 2 (Quantitative)

Beef
Bloomia tropicalis
Cat
Chicken
Cockroach
Crab
Dermatophagoides farinae
Dermatophagoides pteronyssinus
Dog
Egg yolk
Feather mix
Hay dust
Mackerel
Mould fungi 1
Mouse
Octopus
Sardine
Shrimp
Tuna
Green Vegetables

Atopic Allergy Panel (Quantitative)

Derm.pteronyssinus
Derm.farinae
Birch
Grass Mix
Cat
Dog
Alternaria alternate
Milk
α -lactalbumin
β -lactoglobulin
Casein
Egg White
Egg yolk
Bovine serum albumin
Soya bean
Carrot
Potato
Wheat Flour
Hazelnut
Peanut



Other Allergy tests on Thermoscientific Phadia- 200	
Wheeze/Rhinitis/Asthma Panel	Cat dander, Dog dander, Cockroach, cow milk, Egg white, House dust greer, Dermatophagoides Farinae
Immucap Child Comprehensive Panel	Cow Milk, Soyabean, Peanut, Almond, Wheat, Egg-White, Corn, Cat dander, Dog Dander, Cultivated Rye, Dermatophagoides Farinae, Dermatophagoides Pteronyssinus, House Dust Greer, Cockroach, Candida Albicans, Aspergillus Fumigatus, Caesin
Food mix panel, fx5	Egg white, Milk, Fish, Wheat, Peanut, Soybean
Seafood panel,fx2	Fish, Shrimp, Blue mussel, Tuna, Salmon
Grass panel,gx2	Cynodon dactylon, Lolium perenne, Phleum pratense, Poa pratensis, Sorghum halepense, Paspalum notatum
Nuts panel,fx1	Peanut, Hazel nut, Brazil nut, Almond, Coconut
Phadiatop	Cat dander, Dog dander, Alternaria alternate, Aspergillus fumigatus, Cladosporium herbarum, Dermatophagoides pteronyssinus, Blomia tropicalis, Lolium perenne, Cynodon dactylon
Child Food Panel	Cow Milk, Peanut, Egg white, Almond, Corn, Wheat, Soyabean
Environmental panel	Cat & Dog Dander, Dermatophyets, House Dust, Cockroach, Candida, Aspergillus
Allergen Peanut	Child Environmental Panel
Allergen Almond	
Allergen Wheat	
Allergen Egg-White	
Allergen Corn	
Allergen Cat Dander	
Allergen Dog Dander	
Allergen Cultivated Rye	
Allergen Dermatophagoides Farinae	
Allergen Dermatophagoides Pteronyssinus	
Allergen House Dust Greer	
Allergen Cockroach	
Allergen Candida Albicans	
Allergen Aspergillus Fumigatus	
Allergen Caesin	
Allergen Milk	
Allergen Gluten	
Allergen Cow Milk	
Allergen Soyabean	

The "Comprehensive Allergy Panel 120 – Quantitative" is a blood test designed to assess the immune system's sensitivity to a wide array of allergens by measuring specific Immunoglobulin E (IgE) antibodies. This panel evaluates IgE responses quantitatively to 120 allergens, including common environmental and food-related substances. The turnaround time to obtain the results is between 7 and 10 days.

Comprehensive Allergy Panel 120 - Quantitative		
Total IgE	Bermuda grass	Olive
Housedust	Orchard grass	Sycamore Pollen
Dermatophagoides pleronyssinus	Ryegrass	Willow
Dermatophagoides farinae	Timothy grass	Cottonwood
Acaru siro	Common reed	White ash
Tyrophagus putrescentiae	Bent grass	White pine
Cat epithelium & dander	Cultivated rye	Japanese cedar
Dog dander	Common ragweed	Acacia
Hamster epithelium	Mugwort	Cypress
Mouse epithelium / Rat epithelium	Ox-eye daisy	Hevea latex
Guinea pig epithelium	Dandelion	Sunflower
Wool, sheep	Plantain	Silkworm pupa
Rabbit epithelium	Goosefoot Lamb's quarters	Yeast baker's
Horse epithelium	Russian thistle	CCD
Peniciilium notatum	Goldenrod	Tomato
Cladosporium herbarum	Cocklebur	Carrot
Aspergillus furmigatu	Common pigweed	Garlic
Alternaria alternata	Japanese hop	Onion
Rhizopus nigricans	Aider	Celery

Comprehensive Allergy Panel 120 - Quantitative

Bee venom	Birch	Cucumber
Wasp venom	Hazel	Mushroom
Cockroach	Oak	Potato
Sweet vernal grass	Elm	Pumpkin
Eggplant	Walnut	Chicken
Kiwi	Sweet chestnut	Codfish
Mango	Macadamia nut	Tuna
Banana	Sesame	Salmon
Peach	Corn	Pacific squid
Orange	Rice	Mackerel
Strawberry	Wheat flour	Plaice
Apple	Gluten	Eel
Cacao	Rye	Anchovy
Coconut	Barley meal	Lobster
Peanut	Buckwheat	Crab
Soy bean	Egg white	Shrimp
White bean	Egg yolk	Blue mussel
Hazel nut	Milk	Clam
Brazil nut	Cheese	Oyster
Almond	Pork	Scallop
Cashew nut	Beef	
Pine nut	Lamb meat	

Selected Drug & Mixed Allergy Panel

No.	Allergen	Code
1	Penicilloyl G	c1
2	Penicilloyl V	c2
3	Ampicilloyl	c5
4	Amoxicilloyl	c6
5	Cefaclor	c7
6	Clavulanate	c100
7	Formaldehyde/	k80
8	Isocyanate TDI	f75
9	Isocyanate MDI	k76
10	Isocyanate HDI	k77
11	rDer p 10 (House dust mite (Dp))	d205
12	rDer f 2 (House dust mite (Df))	d101
13	rCan f 1 (Dog dander)	e101
14	rFel d 1 (Cat epithelium)	e94
15	rApi m 1 (Honey bee)	i208
16	rHev b 1 (Latex)	k215
17	rAln g 1 (Alder)	t100
18	rBet v 1 (Birch)	t215
19	rBet v 2 (Birch)	t216
20	rQue a 1 (Oak)	t400
21	rOle e 1 (Olive)	t224
22	rPla a 1 (Sycamore)	t241
23	rPla l 1 (Plantain)	w234
24	rPhl p 1 (Timothy grass)	g205
25	rPhl p 5 (Timothy grass)	g215
26	rPhl p 12 (Timothy grass)	g212
27	rAsp f 3 (<i>Aspergillus fumigatus</i>)	m220
28	rAlt a 1 (<i>Alternaria alternata</i>)	m229
29	nAlpha-Gal (Beef)	o215

Selected Drug & Mixed Allergy Panel

No.	Allergen	Code
30	nSus s 1 (Pork)	e222
31	rGad c 1 (Codfish)	f426
32	rPen a 1 (Shrimp)	f351
33	nGal d 1 (Egg)	f233
34	nGal d 2 (Egg)	f232
35	nBos d 4 (Milk)	f76
36	nBos d 5 (Milk)	f77
37	nBos d 8 (Milk)	f78
38	rTri a 19 (Wheat Flour)	f416
39	nGliadin (Wheat Flour)	f98
40	nGlutenin (Wheat Flour)	f79
41	rFag e 2 (Buckwheat)	f582
42	rFag e 3 (Buckwheat)	f583
43	rGly m 4 (Soybean)	f353
44	nGly m 5 (Soybean)	f431
45	nGly m 6 (Soybean)	f432
46	rPru p 1 (Peach)	f419
47	rPru p 4 (Peach)	f421
48	rMal d 1 (Apple)	f434
49	rMal d 3 (Apple)	f435
50	rAra h 1 (Peanut)	f422
51	rAra h 2 (Peanut)	f423
52	rAra h 3 (Peanut)	f424
53	rAra h 8 (Peanut)	f352
54	rAra h 9 (Peanut)	f427
55	rCor a 1 (Hazelnut)	f428
56	rCor a 8 (Hazelnut)	f425
57	rJug r 1 (Walnut)	f441
58	rJug r 3 (walnut)	f442

FOOD INTOLERANCE



Common food intolerance symptoms include :



Gas



Bloating



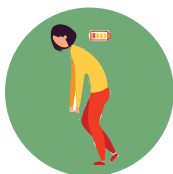
Constipation
& diarrhoea



Itchy skin



Chronic pain
or headache



Chronic fatigue



Disturbed sleep



Water retention

Causes of food intolerance:

- Absence of an enzyme needed to fully digest a food item- Lactose intolerance is a common example.
- Irritable bowel syndrome- This chronic condition can cause cramping, constipation and diarrhoea.
- Sensitivity to food additives- For example; sulfites used to preserve dried fruit, canned goods and wine can trigger asthma attacks in sensitive people.
- Recurring stress.



What is Coeliac disease ?

Coeliac disease is triggered by gluten. It is an autoimmune disease where your immune system produces antibodies that attack the lining of the intestines. This means you cannot absorb food properly, resulting in malnutrition and symptoms that range from pain and diarrhoea to fatigue and nerve damage. You cannot cure coeliac disease but you can stay healthy by keeping to a gluten-free diet. Gluten occurs naturally in wheat, barley and rye but can easily contaminate other cereals and other foodstuffs, such as oats, during processing or packaging.



What is Lactose Intolerance?

People with lactose intolerance are unable to fully digest the sugar (lactose) in milk. As a result, they have diarrhoea, gas and bloating after eating or drinking dairy products. The condition, which is also called lactose malabsorption, is usually harmless, but its symptoms can be uncomfortable.

Too little of an enzyme lactase produced in your small intestine is usually responsible for lactose intolerance. You can have low levels of lactase and still be able to digest milk products. But if your levels are too low you become lactose intolerant, leading to symptoms after you eat or drink dairy.

Did you know that symptoms of lactose and gluten intolerance seem similar?

This can make it difficult to figure out which condition is actually causing digestive problems. Common symptoms can range from mild digestive discomfort to stomach cramps, fatigue and headaches.

Genetics play a role in the susceptibility to gluten and lactose intolerance. The HLA-DQ alleles and MCM6 genes are strongly linked with the predisposition. The genetic testing done by PCR, for gluten and lactose intolerance will detect HLA-DQ alleles and MCM6 genes respectively.





Food Intolerance Panel available at C-Lab :

The food intolerance test panel measures the level of sensitivity to 40 food extracts/extract mixtures from the patient's blood sample. The test is a semi-quantitative enzyme immunoassay for the measurement of food specific IgG4 antibodies.

The turnaround time to obtain the test result is 1 week and no fasting is required upon sample collection.

	FOOD	CODE
1	Wheat	f4
2	Rye	f5
3	Barley	f6
4	Oat	f7
5	Grain Mix A (Buckwheat Amaranth Goosefoot)	fx87
6	Grain Mix B (Corn Rice)	fx602
7	Potato	f35
8	Soy	f14
9	Yeast Mix (Baker's yeast Brewer's yeast)	fx451
10	Gluten	f79
11	Peanut	f13
12	Hazelnut	f17
13	Almond	f20
14	Banana	f29
15	Fruit Mix A (Lemon Orange)	fx88
16	Fruit Mix B (Strawberry Grape Peach)	fx90
17	Apple	f49
18	Pineapple	f52
19	Kiwi fruit	f84
20	Cacao	f97



	FOOD	CODE
21	Egg white	f1
22	Egg yellow	f75
23	Casein	f78
24	Cow's milk	f199
25	Goat's milk	f300
26	Sheep's milk	f325
27	Cod	f3
28	Fish Mix (Salmon Trout)	fx97
29	Tuna	f40
30	Seafood Mix (Shrimp Squid Octopus)	fx81
31	Tomato	f25
32	Legume. Mix(Pea Green bean)	fx144
33	Veg. Mix A (Carrot Celery)	fx98
34	Veg. Mix B (Chicken Turkey)	fx99
35	Leek Mix (Garlic Onion Leek)	fx96
36	Lamb/Mutton	f88
37	Meat Mix A (Pork Beef)	fx91
38	Meat Mix B (Chicken Turkey)	fx92
39	Coffee	f955
40	Mustard	f89





Food Print Intolerance Panel available at C-Lab:

The food print intolerance test panel utilises state-of-the-art microarray technology to provide comprehensive and accurate analysis of IgG antibodies to over 200 food items, with optional vegan and vegetarian panels. Using advanced microarray technology, our FoodPrint Intolerance test identifies how your body reacts to various kinds of food. It helps us detect any sensitivities by studying interactions between antibodies and food items. It is a powerful way to understand your body's responses to various food. The microarray's ability to analyse a wide range of food type in a single test, combined with its quantitative approach, makes FoodPrint a cutting-edge solution for assessing food intolerances, providing valuable insights into potential dietary triggers and helping individuals make informed choices for optimal health and well-being.

The turnaround time to obtain the test result is 2 weeks and no fasting is required upon sample collection.

FOOD GROUP	FOOD
DAIRY / EGG	Alpha-Lactalbumin, Egg White Milk (Cow), Beta-Lactoglobulin, Egg Yolk, Milk (Goat), Casein Milk (Buffalo), Milk (Sheep)
GRAINS (Gluten-Containing)*	Barley,Malt, Wheat, Couscous, Oat, Wheat Bran, Durum Wheat, Durum Wheat, Rye, Gliadin*, Spelt
GRAINS (Gluten-Free)	Amaranth, Millet, Rice, Buckwheat, Polenta, Tapioca, Corn (Maize), Quinoa



FOOD GROUP	FOOD
FRUIT	Apple, Guava, Pear, Apricot, Kiwi, Pineapple, Avocado, Lemon, Plum, Banana, Lime, Pomegrate, Blackberry, Lychee, Raisin, Blackcurrant, Mango, Raspberry, Blueberry, Melon(Galia/Honeydew), Redcurrant, Cherry, Mulberry, Rhubarb, Cranberry, Nectarine, Strawberry, Date, Olive, Tangerine, Fig, Orange, Watermelon, Grape (Black/Red/White), Papaya, Grapefruit, Peach
VEGETABLES	Artichoke, Cauliflower, Potato, Asparagus, Celery Radish, Aubergine, Chard, Rocket, Bean (Broad) Chickpea, Shallot, Bean (Green), Chicory, Soya Bean, Bean (Red Kidney), Cucumber, Spinach, Bean (White Haricot), Fennel (Leaf), Squash, (Butternut/Carnival), Beetroot, Leek, Sweet Potato, Broccoli, Lentil, Tomato, Brussel Sprout, Lettuce, Turnip, Cabbage (Red), Marrow, Watercress, Cabbage (Savoy/White), Onion, Yuca, Caper, Pea, Carrot, Pepper (Green/Red/Yellow)
FISH/ SEAFOOD	Alga Espagumette, Haddock, Sardine, Alga Spirulina, Hake, Scallop Alga Wakame, Herring, Sea Bream (Gilthead), Anchovy, Lobster, Sea Bream (Red), Barnacle, Mackerel, Shrimp/Prawn, Bass, Monkfish, Sole, Carp, Mussel, Squid, Caviar, Octopus, Swordfish, Clam, Oyster, Trout, Cockle, Perch, Tuna, Cod, Pike, Turbot, Crab, Plaice, Winkle, Cuttlefish, Razor Clam, Eel, Salmon



FOOD GROUP	FOOD
MEAT	Beef,Ostrich, Turkey,Chicken, Ox ,Veal, Duck, Partridge, Venison, Goat, Pork, Wild Boar, Horse,Quail, Lamb, Rabbit
HERBS/SPICES	Aniseed, Dill , Nutmeg, Basil, Garlic ,Parsley, Bayleaf, Ginger, Peppercorn (Black/White), Camomile, Ginkgo, Peppermint, Cayenne, Ginseng, Rosemary, Chilli (Red), Hops, Saffron, Cinnamon, Liquorice ,Sage, Clove, Marjoram ,Tarragon, Coriander (Leaf) ,Mint ,Thyme, Cumin, Mustard Seed, Vanilla, Curry (Mixed Spices), Nettle
NUTS/ SEEDS	Almond, Hazelnut Rapeseed, Brazil Nut ,Macadamia Nut, Sesame Seed, Cashew Nut, Peanut, Sunflower Seed, Coconut, Pine Nut, Tiger Nut, Flax Seed, Pistachio, Walnut
MISCELLANEOUS	Agar Agar, Cocoa Bean ,Tea (Black), Aloe Vera ,Coffee, Tea (Green), Cane Sugar, Cola Nut, Transglutaminase, Carob, Honey, Yeast (Baker's), Chestnut ,Mushroom,Yeast (Brewer's),



