

RMA FST Basic **Accession: 111111**

Healthcare Professional
Dr. John Smith
1234 Imagination Road
Calgary, AB T3G 1X1

Patient
Sally Thomson

Age: 31
Date of Birth: 1985/12/20
Gender: Female

P: 403-555-1234
F:



RESULT STATUS	NOTE: The limits assigned to individual antigens are based on a statistical analysis of a Canadian population
NORMAL	The upper limit for assigning Normal status varies by antigen.
BORDERLINE	The upper and lower limits for assigning Borderline status vary by antigen.
ELEVATED	The lower limit for assigning Elevated status varies by antigen.

Dairy / Egg

0 Alpha-Lactalbumin (whey)	0 Beta-Lactoglobulin (whey)	67 Casein
72 Egg White	8 Egg Yolk	91 Milk (Cow)
32 Milk (Goat)	31 Milk (Sheep)	

Grains

47 Barley	29 Durum Wheat	87 Gliadin
9 Oat	25 Rye	54 Wheat
22 Wheat Bran		

Grains (Gluten-Free)

1 Buckwheat	48 Corn	0 Millet
50 Rice		

Fruit

3 Apple	1 Apricot	3 Avocado
4 Banana	6 Black Currant	8 Blackberry
7 Cherry	9 Cranberry	5 Grape (Black/Red/White)
6 Grapefruit	3 Kiwi	3 Lemon
15 Lime	4 Melon (Galia/Honeydew)	1 Nectarine
3 Olive	14 Orange	3 Peach
5 Pear	2 Pineapple	25 Plum
10 Raspberry	4 Strawberry	

Vegetables

0 Asparagus	1 Beet	5 Bell Peppers
7 Broccoli	7 Brussels Sprout	23 Cabbage (Savoy/White)

Vegetables

15	Carrot	1	Cauliflower	11	Celery
2	Chicory	7	Cucumber	1	Eggplant
2	Leek	2	Lettuce	4	Onion
42	Potato	3	Spinach	1	Tomato

Fish / Seafood

5	Cod	3	Crab	10	Haddock
5	Herring	3	Lobster	2	Mackerel
22	Mussel	53	Oyster	4	Plaice
1	Salmon	22	Scallop	3	Shrimp/Prawn
4	Sole	0	Swordfish	1	Trout
8	Tuna	0	Turbot		

Meat

3	Beef	2	Chicken	0	Duck
3	Lamb	3	Pork	0	Turkey
4	Veal	3	Venison		

Herbs / Spices

3	Basil	2	Cinnamon	0	Clove
0	Coriander (Leaf)	0	Cumin	2	Dill
4	Garlic	7	Ginger	5	Hops
1	Mint	16	Mustard Seed	11	Nutmeg
0	Parsley	0	Peppercorn (Black/White)	6	Red Chili Pepper
1	Sage	0	Thyme	0	Vanilla

Nuts / Seeds / Legumes

38	Almond	1	Bean (Green)	25	Bean (Red Kidney)
9	Bean (White Haricot)	16	Brazil Nut	0	Canola
16	Cashew Nut	1	Coconut	21	Hazelnut
5	Lentil	40	Pea	22	Peanut
33	Pistachio	0	Sesame Seed	4	Soy Bean
14	Sunflower Seed	8	Walnut		

Miscellaneous

5	Cane Sugar	3	Carob	3	Cocoa Bean
3	Coffee	2	Mushroom	2	Tea (Black)
0	Tea (Green)	59	Yeast (Baker's)	58	Yeast (Brewer's)

Candida IgG

Status:

Negative



George Gillson MD, PhD
Medical Director

Note: The College of Physicians and Surgeons of Alberta considers some forms of testing for food reactions to be complementary medicine. Specific IgG quantification has been utilized in research settings to assess and investigate Type I and Type III allergies respectively. However, the assessment of human IgG antibodies specific for individual food antigens is not a recognized diagnostic indicator of allergy. Rocky Mountain Analytical does not diagnose or make treatment recommendations. Data is provided for research and educational purposes only.

IgG FOOD REACTIONS VS IgE FOOD ALLERGIES: IgG food reactions differ significantly from classic IgE food allergies. IgE food allergies are immediate reactions that occur within minutes or hours of consuming a food and may include serious reactions like hives, difficulty breathing and anaphylaxis. In contrast, an IgG food sensitivity is a delayed reaction that occurs hours to days after the food is consumed, with symptoms that may not appear for days or months. Lack of an IgG antibody response to a specific food does not rule out the possibility that the food may elicit an IgE reaction (food allergy). Patients should continue to avoid foods to which they have a known IgE food allergy. Conversely, elevated IgG to a specific food is not diagnostic of IgE food allergy. If symptoms (e.g. hives, difficult breathing) are suggestive of food allergy, the patient should be referred to an Allergist Specialist for specific IgE testing via ImmunoCAP.

IgG REACTIONS: IgG reactions are food sensitivities, not food allergies. When a reactive food is consumed, the IgG antibody forms a complex with the food antigen. Normally, the body is able to eliminate these antibody-antigen complexes, but with excess antigen, small complexes tend to deposit in blood vessel walls where they can cause tissue injury via the release of inflammatory mediators [Brantzaeg 1997]. Over time, this tissue injury may contribute to the development of a variety of health conditions. Research has shown that elimination of IgG reactive foods from the diet improves a variety of health conditions including irritable bowel syndrome and migraine headaches [Atkinson, Alpay]. Eliminating IgG reactive foods has also been reported to help with eczema, mood disturbances, weight gain and other digestive disturbances [Mullin, Lewis, Bentz].

NORMAL REACTIONS: A normal reaction to a food antigen may indicate lack of recent exposure to that food. Therefore, under circumstances of complete avoidance, it is impossible to determine whether the food(s) avoided would elicit a reaction if consumed recently. It is important to note that a normal reaction to a specific food does not mean it can be safely consumed by someone who has previously had a serious reaction to that specific food. Serious reactions to foods (e.g. anaphylaxis or hives) are caused by IgE antibodies, not IgG. Therefore, a normal IgG reaction to a known food allergen is not an indication the tested food is safe to consume.

PATIENT HAS A REACTION TO ONE OR MORE FOOD ANTIGENS NOT CONSUMED REGULARLY: It is possible to have elevated IgG to foods not recently consumed, or to foods that have been specifically avoided (i.e. due to serious previous IgE reaction). Elevated IgG in this circumstance may be due to panallergen reactions [refer to the RMA FST Food Sensitivities and Cross-Reactions document], or to an abundance of the IgG4 subtype antibody, which acts on mast cells and may have a protective effect for IgE reactions and antibodies may remain in circulation for 18 months even with no exposure [Mullin].

GOAT'S MILK AND/OR SHEEP'S MILK ARE BORDERLINE OR ELEVATED but patient may have never consumed: In vitro studies have shown extensive cross reactivity between milks from ruminant species. Significant amino acid sequence homology between milk from cows, goats and sheep mean cross-reactivity is highly probable [URL: www.uptodate.com/contents/milk-allergy-management. Accessed June 11, 2016]. Clinical research has found that a significant percentage of cow's milk allergic patients also react to goat and sheep milks [Pediatr Allergy Immunol. 2012 Mar;23(2):128-32].

WHEAT IS BORDERLINE OR ELEVATED AND WHEAT BRAN IS NORMAL: Wheat is a 42 chromosome member of the Triticum genus that is comprised of the whole cereal grain; endosperm, aleurone and pericarp. Wheat bran is the hard exterior coating of the wheat grain (aleurone and pericarp) that contains a high percentage of fibre and fatty acids. The difference in reactivity between wheat and wheat bran may be explained by the presence of allergenic proteins in the endosperm of whole wheat [Clin Exp Allergy. 1990;20(5):501-509], versus fibre and fatty acids found in the exterior shell of the wheat bran.

BREWER'S YEAST IS BORDERLINE OR ELEVATED: Note that Brewer's Yeast and Baker's Yeast are different strains of one organism, *Saccharomyces cerevisiae*. The Brewer's Yeast strain is slower acting and has less after-taste than Baker's Yeast. Food sources of Brewer's Yeast include: beer, cider, dried fruits, marmite, miso, tamari, vegemite, yeast extract, wine. Brewer's Yeast may also be added to cookies, oatmeal and yogurt to improve nutrition. Brewer's Yeast is high in chromium and B vitamins and may be used in supplements.

BAKER'S YEAST IS ELEVATED: Note that Baker's yeast and Brewer's yeast are different strains of one organism, *Saccharomyces cerevisiae*. Baker's yeast must multiply quickly and under high heat, and so the appropriate strain of *Saccharomyces cerevisiae* is selected for rapid growth and ability to tolerate high heat. Food sources of baker's yeast include: bagels, bread, buttermilk, cheese, MSG, Oxo cubes, pizza dough, pretzels, root beer, soy sauce, soup, sourdough.

REACTIVITY TO CRUSTACEA AND/OR MOLLUSCA: Reaction to Crustacea and/or Mollusca (even in the absence of exposure to, or with strict avoidance of), may indicate cross-sensitivity to TROPOMYOSIN, an allergenic protein found in insects and arachnids. Dust mites and cockroaches are common tropomyosin-containing allergens. If the clinician determines that exposure to tropomyosin could be contributing to clinical symptoms, measures to reduce exposure to insect and arachnid antigens may be recommended. Refer to the RMA FST Food Sensitivities and Cross-Reactions document for more information on cross-reactions.

ELEVATED REACTIONS TO FOODS: Interpretation comments are provided for certain foods. Comments appear when related foods give seemingly inconsistent results (e.g. casein normal and cow's milk high) and for reactive foods that are not commonly found in the North American diet. Refer to the RMA Food Reaction Guide for commentary on sources of individual foods or food categories.

Provider:
Dr. John Smith ND

Client:
Sally Thomson
DOB: 20-Dec-1985

ORDER BY REACTIVITY Report

ELEVATED FOODS

87	Gliadin	59	Yeast (Baker's)	53	Oyster
50	Rice	48	Corn	42	Potato

BORDERLINE FOODS

91	Milk (Cow)	72	Egg White	67	Casein
58	Yeast (Brewer's)	54	Wheat	47	Barley
40	Pea	38	Almond	33	Pistachio
32	Milk (Goat)	31	Milk (Sheep)	29	Durum Wheat
25	Plum	25	Rye		

NORMAL FOODS

25	Bean (Red Kidney)	23	Cabbage (Savoy/White)	22	Mussel
22	Peanut	22	Scallop	22	Wheat Bran
21	Hazelnut	16	Brazil Nut	16	Cashew Nut
16	Mustard Seed	15	Carrot	15	Lime
14	Orange	14	Sunflower Seed	11	Celery
11	Nutmeg	10	Haddock	10	Raspberry
9	Bean (White Haricot)	9	Cranberry	9	Oat
8	Blackberry	8	Egg Yolk	8	Tuna
8	Walnut	7	Broccoli	7	Brussels Sprout
7	Cherry	7	Cucumber	7	Ginger
6	Black Currant	6	Grapefruit	6	Red Chili Pepper
5	Bell Peppers	5	Cane Sugar	5	Cod
5	Grape (Black/Red/White)	5	Herring	5	Hops
5	Lentil	5	Pear	4	Banana
4	Garlic	4	Melon (Galia/Honeydew)	4	Onion
4	Plaice	4	Sole	4	Soy Bean
4	Strawberry	4	Veal	3	Apple
3	Avocado	3	Basil	3	Beef
3	Carob	3	Cocoa Bean	3	Coffee
3	Crab	3	Kiwi	3	Lamb
3	Lemon	3	Lobster	3	Olive
3	Peach	3	Pork	3	Shrimp/Prawn
3	Spinach	3	Venison	2	Chicken
2	Chicory	2	Cinnamon	2	Dill
2	Leek	2	Lettuce	2	Mackerel
2	Mushroom	2	Pineapple	2	Tea (Black)
1	Apricot	1	Bean (Green)	1	Beet

NORMAL FOODS

1	Buckwheat	1	Cauliflower	1	Coconut
1	Eggplant	1	Mint	1	Nectarine
1	Sage	1	Salmon	1	Tomato
1	Trout	0	Alpha-Lactalbumin (whey)	0	Asparagus
0	Beta-Lactoglobulin (whey)	0	Canola	0	Clove
0	Coriander (Leaf)	0	Cumin	0	Duck
0	Millet	0	Parsley	0	Peppercorn (Black/White)
0	Sesame Seed	0	Swordfish	0	Tea (Green)
0	Thyme	0	Turbot	0	Turkey
0	Vanilla				