

Optimizing your Health through Nutrition

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Nutrition in Scleroderma

1. Prevent Malnutrition
2. Reduce Inflammation
3. Increase energy level/reduce fatigue
4. Improve digestive problems – elimination diets

1. Prevent Malnutrition



How common is malnutrition?

- ❑ 18 % in systemic scleroderma
- ❑ Contributing factors:
 - Gastrointestinal Symptoms**
 - Heartburn 71%
 - Swallowing Problems 52%
 - Bloating 80%
 - Diarrhea 51%
 - Constipation 51%
 - Hand disease** – meal preparation, feeding
 - Elimination Diets**

1. Prevent Malnutrition

- ❑ Monitor weight
- ❑ Eat smaller meals more frequently
- ❑ Modify texture if needed
- ❑ Identify which foods trigger symptoms (food diary)
- ❑ Avoid extreme elimination diets

2. Reduce Inflammation

- ❑ Scleroderma is an auto-immune condition characterized by inflammation and overproduction of collagen
- ❑ There is no specific diet or foods that reduce collagen production

Anti-oxidants, Fiber, Omega-3 fatty acids

- ❑ **Antioxidants, Fiber**

Brightly coloured fruits and vegetables

100% whole grains – all 3 parts of grains – helps with motility problems

- ❑ **Omega-3**

Good fats – olive oil, canola, oil, avocados, pistachios, natural peanut butter, eggs, dairy products, Fatty fish: mackerel, lake trout, herring, sardines, albacore tuna and salmon (cold water)

Avoid

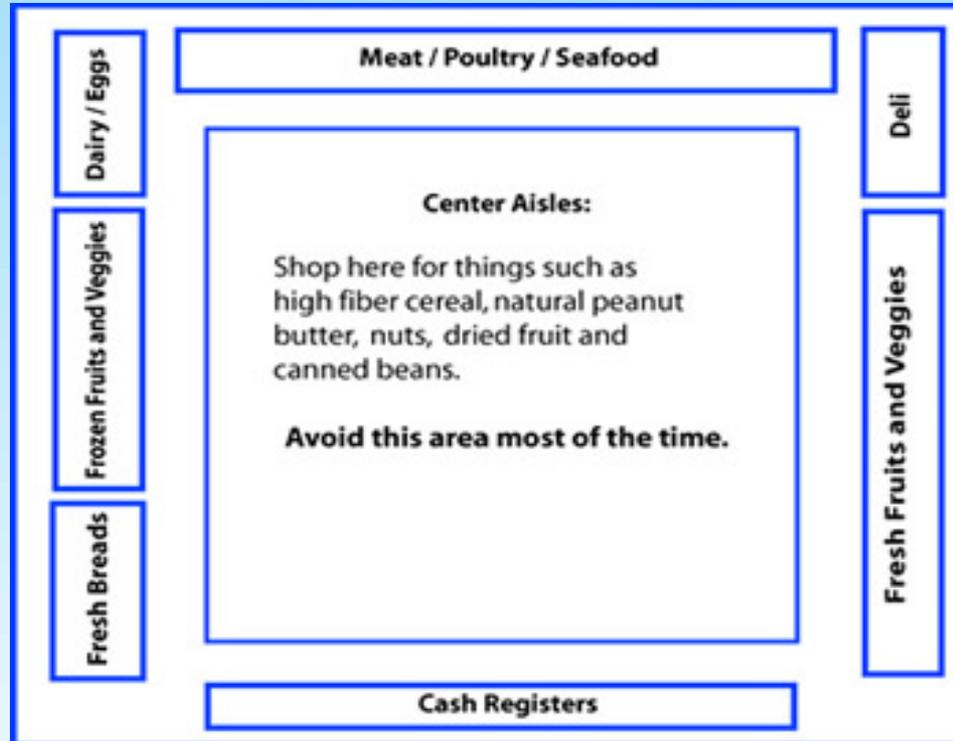
- ❑ Trans-fats – pro-inflammatory
- ❑ High intakes of animal protein and fat – processed meat; bacon, sausage, hotdogs
- ❑ Fats cooked at high temperatures – deep frying
- ❑ Grains without fiber – white flour, white bread
- ❑ High fructose corn syrup – similar to table sugar
max 6-9 teaspoons per day

Avoid over processed foods

INGREDIENTS: ENRICHED FLOUR (WHEAT FLOUR, NIACIN, REDUCED IRON, THIAMIN MONONITRATE [VITAMIN B₁], RIBOFLAVIN [VITAMIN B₂], FOLIC ACID), CORN SYRUP, SUGAR, SOYBEAN AND PALM OIL (WITH TBHQ FOR FRESHNESS), CORN SYRUP SOLIDS, DEXTROSE, HIGH FRUCTOSE CORN SYRUP, FRUCTOSE, GLYCERIN, CONTAINS 2% OR LESS OF COCOA (PROCESSED WITH ALKALI), POLYDEXTROSE, MODIFIED CORN STARCH, SALT, DRIED CREAM, CALCIUM CARBONATE, CORNSTARCH, LEAVENING (BAKING SODA, SODIUM ACID PYROPHOSPHATE, MONOCALCIUM PHOSPHATE, CALCIUM SULFATE), DISTILLED MONOGLYCERIDES, HYDROGENATED PALM KERNEL OIL, SODIUM STEAROYL LACTYLATE, GELATIN, COLOR ADDED, SOY LECITHIN, DATEM, NATURAL AND ARTIFICIAL FLAVOR, VANILLA EXTRACT, CARNAUBA WAX, XANTHAN GUM, VITAMIN A PALMITATE, YELLOW #5 LAKE, RED #40 LAKE, CARAMEL COLOR, NIACINAMIDE, BLUE #2 LAKE, REDUCED IRON, YELLOW #6 LAKE, PYRIDOXINE HYDROCHLORIDE (VITAMIN B₆), RIBOFLAVIN (VITAMIN B₂), THIAMIN HYDROCHLORIDE (VITAMIN B₁), CITRIC ACID, FOLIC ACID, RED #40, YELLOW #5, YELLOW #6, BLUE #2, BLUE #1.



Grocery Shopping



Nightshade Vegetables

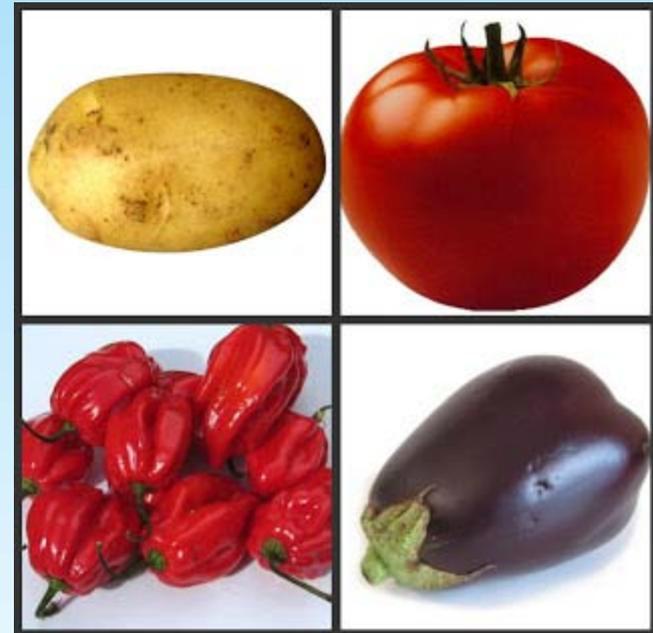
White potatoes

Tomatoes

Hot and sweet peppers

Eggplant

Solanine is an alkaloid found in nightshades (green potatoes) that is thought to cause inflammation and pain – solanine can be broken down by high temperatures



Nutrition and Scleroderma

- ❑ 1. Prevent Malnutrition
- ❑ 2. Reduce Inflammation
- ❑ 3. Increase Energy
- ❑ 4. Improve Gastrointestinal symptoms



3. Increase Energy

- ❑ Prepare and freeze meal when feeling well
- ❑ Find retailers that prepared ready to eat foods
- ❑ Eat smaller amounts more frequently
- ❑ Keep ahead of thirst – dehydration aggravates digestive problems
- ❑ Assess B12, Iron, Vitamin D levels – low levels may contribute to fatigue

4. Improve Gastrointestinal Symptoms

- ❑ Reflux - Spicy Vegetables

salsa, onions, garlic, curry, peppermint, spearmint

- ❑ Bloating, Gas

cauliflower, broccoli, cabbage, peppers, beans, carbonated beverages

Celiac disease vs. Gluten sensitivity

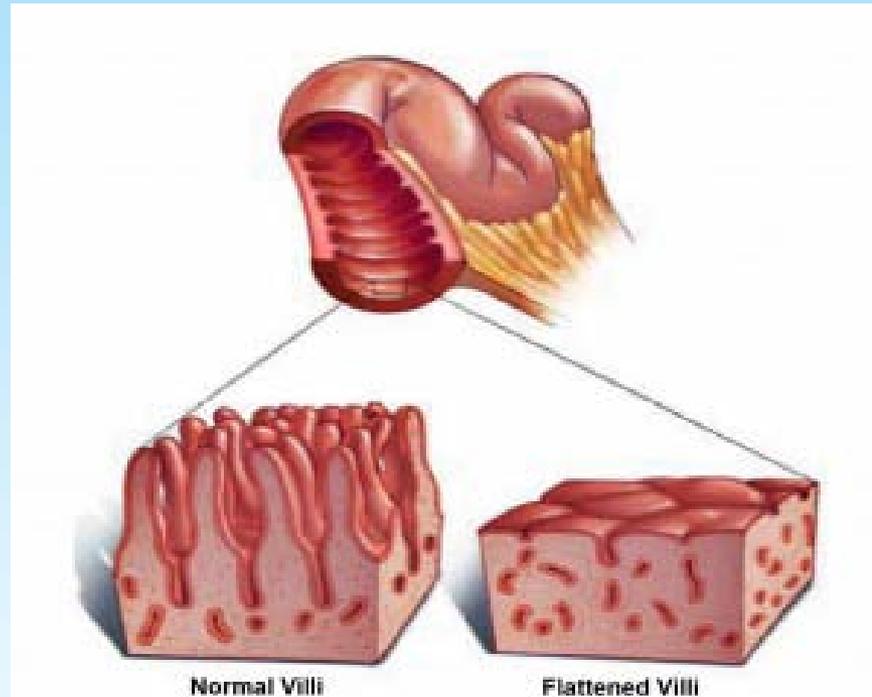
Celiac disease is an autoimmune disease that affects the small intestine causing it to become inflamed when gluten (found in wheat, barley, rye) is digested. The immune system then generates an abnormal response to gluten and attacks its own intestinal tissue. This leads to the wasting away of the villi that line the small intestine, malabsorption of nutrients leading to malnutrition.

Gluten sensitivity not associated with a serious auto-immune response

Common symptoms of gluten sensitivity include abdominal pain similar to irritable bowel syndrome, fatigue, headaches

Unclear whether a small group will go on to develop celiac disease

Celiac can lead to malnutrition



Goals

- ❑ Eliminate ALL gluten – obvious sources and hidden sources – all form of wheat, oats, rye, barley
- ❑ Eliminate cross contamination – toasters, cutting boards etc...
- ❑ Checking nutrition labels, ingredient listings

Sources of Gluten

Atta (chapatti flour)	
Barley (flakes, flour, pearl)	
Beer, ale, lager	
Breading and bread stuffing	
Brewers yeast	
Bulgur	
Communion wafers	
Couscous	
Croutons	
Dinkel (also known as spelt)	
Durum	
Einkorn	
Emmer	
Farina	
Farro or Faro (also known as spelt)	
Fu (Japanese Wheat Gluten)	
Graham flour	
Hydrolyzed wheat protein	
Kamut	
	Malt, malt extract, malt syrup and malt flavouring
	Malt vinegar
	Malted milk
	Matzoh, matzoh meal
	Modified wheat starch
	Oatmeal, oat bran, oat flour and whole oats
	Pastas
	Rye bread and flour
	Seitan
	Semolina
	Spelt (also known as farro or fardo, dinkel)
	Triticale
	Wheat bran
	Wheat flour
	Wheat germ
	Wheat starch

The Gluten-Free Certification Program (GFCP)

Voluntary certification program designed for Canadian manufacturers of gluten-free food, drug and pharmaceutical products

Differentiate themselves from many gluten free claims on packages

Endorsed by Canadian Celiac Association



FODMAP DIET

Fermentable Oligo, Di, and Mono Saccharides And Polyols

Carbohydrates that are not well absorbed in the small bowel and can result in pain, a sensation of bloating, abdominal distension and motility disorders

Fructose (fruit)

Lactose (milk)

Sugar Alcohols sorbitol, mannitol (diet products, sugarless gum)

Sources of FODMAPs

Wheat	Apples	Prunes
Rye	Apricots	Watermelon
	Avocados	Cauliflower
	Blackberries	Mushrooms
Onion	Cherries	
Garlic	Lychees	Sugar
Beetroot	Peaches	Chocolate
Chicory (Inulin)	Pears	Ice cream
Leeks	Plums	Frozen Yogurt
Radicchio Lettuce		
	Soy products	
Beans	Milk	
Chickpeas	Soft Cheeses	
Lentils	Most yogurts	
Edamane	(Greek Yogurt has lowest FODMAP)	



Delicious white pasta
with the benefit of fibre



- 15 g of protein per portion
- Creamy texture
- Probiotic

Keep a Food Diary for 1 week

What (type, cooking method)

When (time of day)

How much

Physical symptoms (15min - 24 hours after eating)

Potential Problem Foods

- Spicy Foods
- Gassy Vegetables
- High Fat Foods
- Wheat Products
- Dairy Products
- Nightshade Vegetables
- FODMAPs

Pick a group of foods to focus on

Eliminate that group of foods for 3 weeks and record symptoms

Reintroduce foods back into diet every 2-3 days

Foods may be able to be reintroduced in smaller amounts or eaten earlier in the day or in a different form (blended or cooked)

1. Eat a variety of foods and maintain a healthy weight
2. Eat a wide variety of fruits and vegetables, whole grains and omega 3 fatty acids to reduce inflammation
3. Eat small amounts throughout the day and sufficient fluids to stay hydrated and combat fatigue
4. Only avoid foods if proven to cause digestive distress



More Information

- <http://thenuttynutritionist.wordpress.com>
- http://www.sclerodermaontario.ca/Scleroderma_Nutrition.html
- http://www.scleroderma.org/site/DocServer/NUTRITION_FINAL.pd?docID=1462

Linda Kaminska, Dietitian, Dr. Dinesh Khanna

- **Gluten-Free Diet: A Comprehensive Resource Guide 2008**
Shelley Case, Dietitian