

# Inflammatory Arthritis Education Series

## Healthy Eating and Body Weight

This program has been reviewed and endorsed by



Canadian Arthritis  
Patient Alliance

# The Program Faculty

---

## Program Faculty 2020:

### **Dawn Richards, PhD**

Vice President, CAPA  
Person Living with Arthritis

### **Carter Thorne, MD, FRCPC, FACP**

Assistant Professor of Medicine  
Division of Rheumatology,  
University of Toronto  
Consultant Staff,  
Southlake Regional Health Centre  
Director, The Arthritis Program  
Newmarket, Ontario

### **Nathalie Robertson\***

Steering Committee Member, CAPA  
Person Living with Arthritis  
*\*Translation updates of modules*

### **Jordana Schonberger, BAsC, RD, CDE\***

Registered dietitian and Certified diabetes educator  
*\*Healthy Eating and Body Weight module*

## Program Faculty 2015 also included:

### **Jane Prince, RN, BScN**

Nurse Clinician/Educator  
Mary Pack Arthritis Centre  
Vancouver, British Columbia

### **Chris DeBow, MDE**

Project Consultant  
Person Living with Arthritis

### **Lorna Bain, OT Reg(Ont), ACPAC Coordinator**

The Arthritis Program  
Southlake Regional Health Centre  
Newmarket, Ontario

*While this initiative was made with support  
from **abbvie**  
all content was developed independently by  
the Program Faculty.*

# Objectives

By the end of the session, you will:

- Understand how inflammatory arthritis can impact your nutrition.
- Learn about the importance of consuming a nutrient dense diet.
- Discover how to plan a nutritionally balanced and adequate diet.

# Healthy eating

# Healthy eating

**Healthy eating is important because it can help:**

- Provide the body with the nutrients it needs to promote good health
- Promote a healthier body weight
- Provide energy throughout the day

**Help ward off infections**

- Decrease the risk of nutritionally related diseases such as; osteoporosis (thinning of the bones), high blood pressure, high cholesterol, diabetes, and certain types of cancer

# Healthy eating

- The inflammatory process can cause the loss of lean body mass (muscle mass) even while fat mass stays the same or increases.
- It's especially important to consume enough dietary protein. Protein is found in many foods including:
  - Animal meat (chicken, beef, fish, etc.), dairy products (milk, cheese, yogurt, kefir, etc.), plant based foods (legumes, soy, some plant based milks, hemp seed etc.)
- Weight loss and the loss of muscle mass can lead to weakness and an increased risk of infections and falls
- People with arthritis may have difficulty maintaining a well-balanced nutrient-dense diet because of:
  - Lack of appetite due to pain, fatigue, immobility, medications and depression
  - Difficulty shopping for food and preparing meals due to difficulty with movement and/or severe pain when standing or using hands

# Healthy eating

- Nutrition is very personal and there can be a lot of confusion about foods and their impact on disease prevention and management.
- There are many ways to construct a healthy diet
  - If unsure what diet is best for you, consult a registered dietitian
- Choose from a broad range of foods that you enjoy, feel good eating, and tolerate well
- Generally speaking, a healthy diet:
  - Provides your body with all nutrients, vitamins, and minerals needed
  - Includes vegetables, fruits, whole grains, low fat dairy products, lean meats and plant proteins (beans, lentils, chickpeas, nuts and seeds)
  - Includes more whole foods and less processed foods
  - Allows for the moderate consumption of indulgences (foods typically higher in calories, sugar, fat and salt)
  - Is one that works well for you and can be sustained and is not overly restrictive

# Vegetables and fruit

- Choose from a variety of vegetables and fruit daily
- High in antioxidants (vitamins A, C, E) that help prevent free radical damage (cell changes) and some diseases
- Are a good source of fibre
- Try to fill half of your plate with fruits and vegetables at breakfast, lunch and dinner





# Antioxidants

Antioxidants are man-made or natural substances that may prevent or delay some types of cell damage.

Antioxidants are found in many foods, including fruits and vegetables. Examples include:

- Vitamin A (beta-carotene): Highest sources: sweet potato, spinach, carrots, pumpkin, peppers, and beef liver
- Vitamin C: Highest sources: red peppers, oranges, grapefruit, kiwi, broccoli, brussell sprouts
- Vitamin E: Highest sources: sunflower seeds, almonds, spinach, broccoli

High-dose supplements of antioxidants may be linked to health risks in some cases

# Grain products

Grains can be part of a healthy and balanced diet

Grains are either whole (e.g. wheat, corn, rice, oats, barley, quinoa, sorghum, spelt, rye, popcorn, brown rice) or refined (e.g. white bread) and are sometimes enriched with added vitamins and minerals

All types of grains are sources of complex carbohydrates and some key vitamins and minerals (selenium, magnesium, potassium) and antioxidants

To improve the quality of your diet, choose whole-grains instead of refined. Whole grains contain all three edible parts of the seed. Whole grains are typically:

- Higher in fibre
- Contain more vitamins and minerals
- Have less of an effect on blood sugar and insulin response

# Milk and alternatives

Includes milk, yogurt, cheese, kefir, etc.

Alternatives include fortified beverages (e.g. soy, almond, coconut milk) and vegetarian sources

These foods can be good sources of calcium and vitamin D, which are essential for bone health

You may still need to supplement with calcium if you are not getting enough from the diet

# Animal protein

Meat is a source of protein, fat, and a broad range of vitamins and minerals

A balanced diet can include meat from ruminants (e.g. cattle, sheep, goats), poultry (e.g. chicken, turkey, duck), pork, and seafood

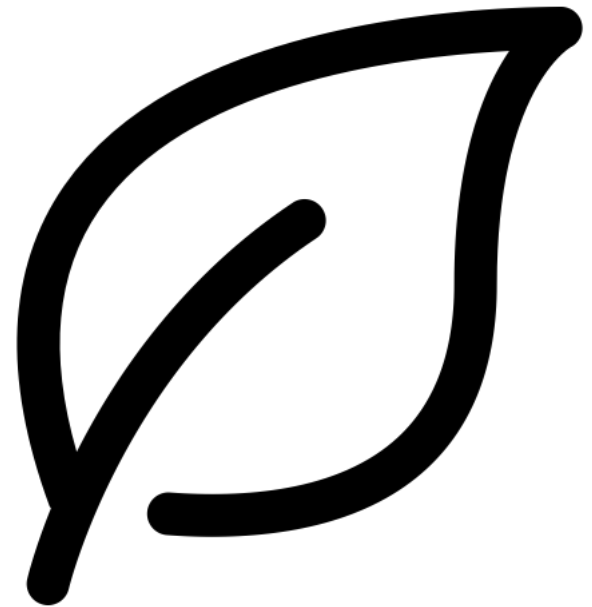
Grass-fed, free-range, and wild meat products can contain higher levels of important nutrients, like omega-3 fats

Choose fresh over processed meat to limit salt intake and preservatives. Try to limit red and processed meats to twice per week.

Try to consume fatty fish twice per week to get an adequate amount of omega-3 fats. Salmon, mackerel, herring, sardines, lake trout and albacore tuna are high in omega-3 fats.

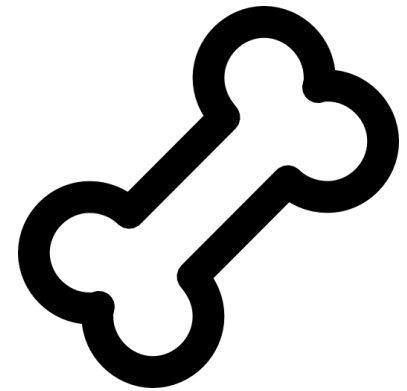
# Plant protein

- Beans, legumes, nuts and seeds are good sources of protein, fibre, vitamins, and minerals
- Legumes are typically low in fat, and high in fiber, folate, potassium, iron and magnesium
- Plant based proteins include beans, lentils, chickpeas, nuts, seeds



# Calcium and Vitamin D

- Calcium and Vitamin D are two nutrients that play an important role for people living with inflammatory arthritis
- Calcium is needed for our heart, muscles and nerves to function properly
- Inadequate calcium significantly contributes to the development of osteoporosis.
  - Calcium alone cannot prevent osteoporosis and is not a substitute for medication that may be needed to curb excessive bone loss
- Vitamin D is needed for the body to absorb calcium and also plays an important role in immune function and the management of inflammation



# Calcium and Vitamin D

- These are the calcium and vitamin D requirements for adults:

<b>Calcium and Vitamin D from Diet + Supplement of Elemental Calcium and Vitamin D<sub>3</sub></b>		
<b>Age</b>	<b>Calcium (elemental)</b>	<b>Vitamin D<sub>3</sub></b>
19 to 50 years	1,000 mg	400 to 1,000 IU
> 50 years	1,200 mg	800 to 2,000 IU
Women/men with osteoporosis	1,200 mg	800 to 2,000 IU

\*Adapted from Osteoporosis Canada and Health Canada

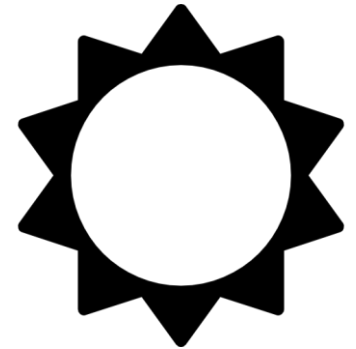
# Foods rich in calcium

Food	Amount of calcium
Milk (1 cup)	300 mg
Milk powder (1/3 cup)	270 mg
Cheese (1 1/2 oz)	300 mg
Yogurt (3/4 cup)	295 mg
Soy beverages (1 cup)	180 mg
Salmon + bones (1/2 can)	240 mg
Sardines + bones (1/2 can)	200 mg
Almonds (1/4 cup)	95 mg
Broccoli (3/4 cup)	50 mg



# Vitamin D

- Vitamin D<sub>3</sub> is the preferred form
- Increases calcium absorption by 30% to 80%
- Sunlight (15 to 20 minutes/day) helps skin to produce Vitamin D
- Vitamin D is found in very few foods and it is almost impossible to get enough vitamin D from the diet. All Canadians should be supplementing with vitamin D year round
- Talk to your healthcare provider about a daily recommended dose



# Foods rich in Vitamin D

Food	Amount of Vitamin D
Fortified milk (1 cup)	100 IU
Fortified soy/almond drink (1 cup)	100 IU
Salmon, canned (3 oz)	530 IU
Sardines, canned (3.5 oz)	480 IU
Liver (3.5 oz)	45 IU
Egg yolk (large)	27 IU

# Fats

Fats are an important part of a healthy diet

- Polyunsaturated fatty acids
  - Essential fatty acids that must be provided by diet are:
    - Omega-3's (alpha-linolenic acid)
    - Omega-6's (linoleic and gamma-linolenic acid)
- Monounsaturated fatty acids(e.g., olive oil)
- Saturated fats (e.g. red meat, high fat dairy products such as butter, cream, ice cream, full fat cheese, lard, coconut oil) and trans fats (e.g. hydrogenated oils found in commercial bakery products, some snack foods) should be limited. They negatively impact the cholesterol levels and may have an impact on inflammatory symptoms

# Fats

- Unsaturated fats are liquid at room temperature and can be used for cooking, salad dressings, or added to food
- Saturated fats are solid at room temperature and can be used for cooking, especially at higher temperatures
- Most dietary recommendations include advice to limit the use of saturated fat in your diet

# Fats

## Omega-3 Fatty Acids

- Studies show they may help to reduce:
  - Inflammation and stiffness in rheumatoid arthritis
  - Risk of developing cardiovascular disease and stroke
  - Risk of death after a heart attack
  - Blood fats (triglycerides and very low density lipoproteins)

# Omega 3 fats

- EPA (eicosapentaenoic acid) and DHA (docosahexaenoic acid) are found in fish such as salmon, mackerel, herring, trout, sardines.
- ALA (alpha-linolenic acid) is the most common omega 3 fatty acid in the diet.
  - Needs to be converted into EPA or DHA before it can be used by the body. But the conversion process is not efficient and only a small percentage is converted.
  - Is found in plant-based foods such as walnuts, soybeans, flax seed, chia seed, hemp.

# Omega 6 fats

- Linoleic and gamma-linoleic acid (GLA)
- Found in raw nuts, seeds, legumes and unsaturated vegetable oils, such as safflower, borage, evening primrose, sesame, soybean and black currant seed oil

# Omega 3 and Omega 6 fatty acids

- The Western diet is high in omega 6 fatty acids and generally low in omega 3 fatty acids. This imbalance can contribute to inflammation.
- Typical North American diet tends to contain 14 to 25 times more omega-6 fatty acids than omega-3 fatty acids
  - Ideal ratio is 2.5-4:1 (depends on the disease)



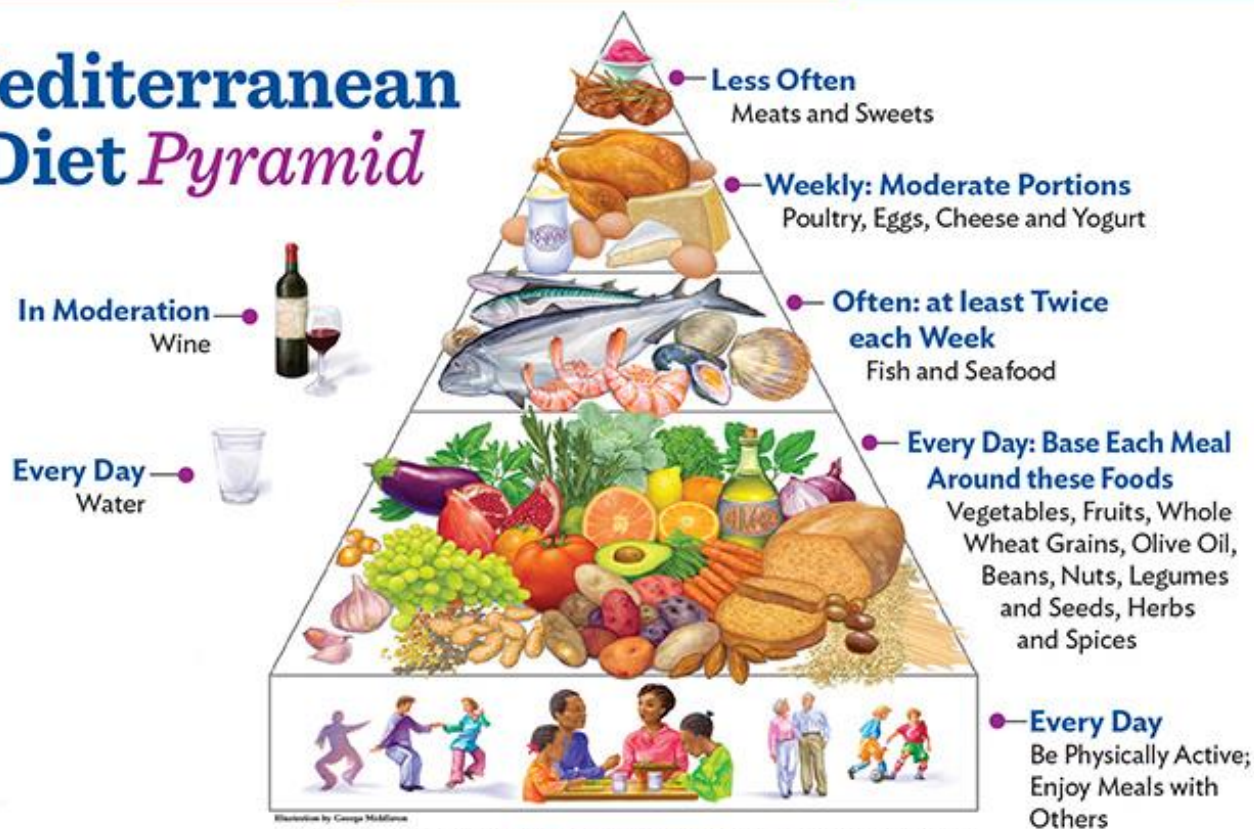
# Mediterranean Diet

## Key components:

- Plant based foods (fruits, vegetables, nuts, whole grains, legumes)
- Replace butter with healthy fats such as olive oil
- Limit red meat
- Eat more fish
- Drink wine in moderation
- \*\*healthy balance of omega 3 & 6 fatty acids

# Mediterranean Diet

## Mediterranean Diet Pyramid



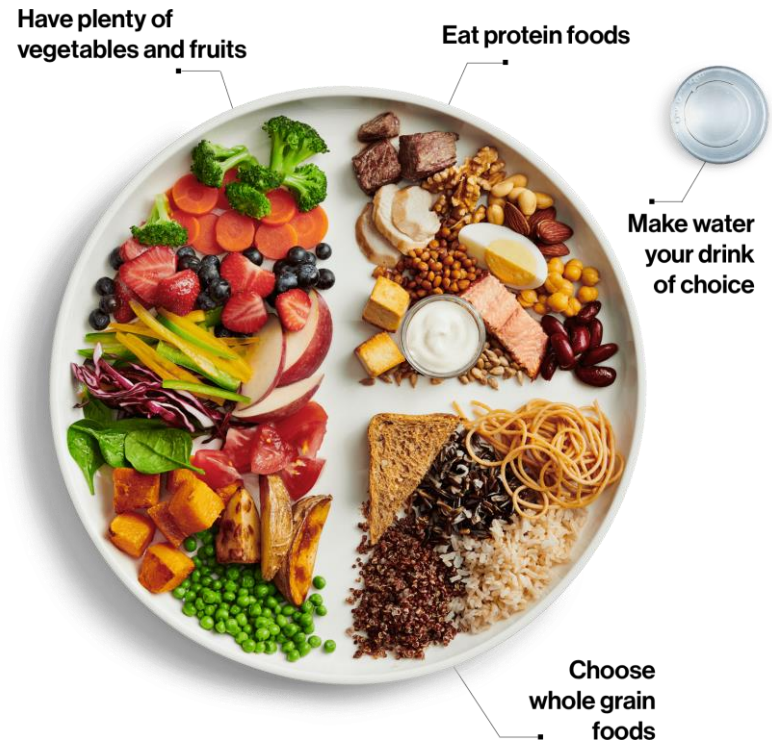
© 2009 Oldways Preservation and Exchange Trust • [www.oldwayspt.org](http://www.oldwayspt.org)

# Fluids

- Try to stay well hydrated
- Look for signs of dehydration (dark urine, dry mouth, fatigue)
- Rehydrate often with water, herbal teas, soups and broths, milk
- Drinks that contain caffeine and alcohol can be dehydrating
- Because of their high sugar content, limit your intake of soft drinks and juices
- Drinking too much can lead to a loss of important nutrients and affect blood concentrations of electrolytes

# Canada's Food Guide

- Canada's Food Guide is considered the primary source of nutritional guidelines by many healthcare providers
- Provides recommendations on how to maintain a healthy diet
- You can use it to form the basic building blocks of your diet
- Modify it for what works best for your body



# Canada's Food Guide

- Developed by Health Canada (latest revision: January 2019 - <https://food-guide.canada.ca/en/healthy-eating-recommendations/>)
- There are many resources available pertaining to Canada's Food Guide. It is available in many different languages.
- You can access the resources from this webpage: <https://www.canada.ca/en/health-canada/services/canada-food-guide/resources/resources-download.html>

## Key messages

- Eat plenty of vegetables and fruits, whole grains and foods with protein. Choose plant based proteins more often.
- Limit highly processed foods
- Choose water as your beverage
- Use food labels
- Be aware of the impact of marketing on food choices
- Eat meals with others
- Enjoy your food
- Cook more often
- Be mindful of your eating habits

# Healthy body weight

# Healthy body weight

Maintaining a healthy body weight is important because:

- Losing excess weight puts less strain on the joints and can help ease arthritis symptoms
- Gaining weight if needed gives the body the reserves (extra energy) it needs in times of illness
- Some medications prescribed to treat your arthritis may affect your body weight

# Healthy body weight

## It is important to eat:

- Lots of fresh vegetables and fruit, whole grains, lean protein and healthy fats
- Adequate fibre and fluids to ensure bowel regularity
- Adequate fluids to remain hydrated and remove toxins
- Nutrient dense foods to:
  - Feel full longer
  - Decrease cravings
  - Slow release of carbohydrates and decrease insulin response
- Limit foods high in refined/added sugars, fat, sodium.



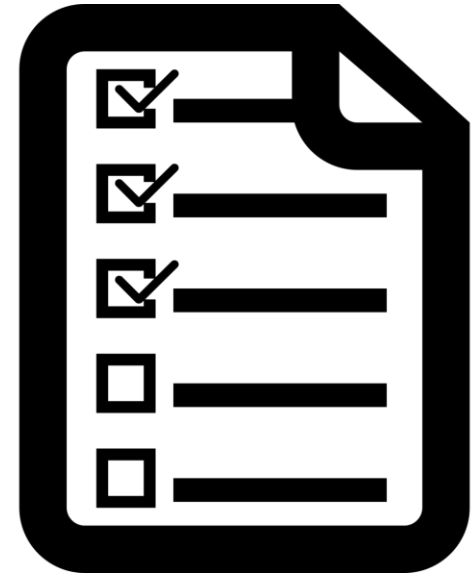
# Healthy body weight

## It is also important *how* you eat

- Become aware of your body's thirst and hunger symptoms
- Eat slowly and mindfully
  - Takes 20 minutes for your brain to register that your stomach is full
- The time of day you eat may have an effect on how you feel / digest
- Work on improving the balance of your meals to maximize satiety and meet your nutrient needs. This can be achieved by following the “plate model” as per Canada's Food Guide:
  - Fill ½ plate with vegetables
  - Fill ¼ plate with protein
  - Fill ¼ plate with carbohydrates

# Healthy body weight

- Plan ahead
- Stock your home with nutrient-dense foods
- Shop with a grocery list
- Develop a weekly meal plan
- Prepare food ahead of time
- Avoid skipping meals because that can lead to hunger and food cravings later in the day



# Healthy body weight

## Other strategies to consider:

- Make a decision to engage in a healthy lifestyle
- Identify obstacles that have prevented you from losing weight in the past
- Explore options to remove obstacles
- Make a plan and share it with family or a friend
- Set realistic goals
- Understand that there may be other factors affecting your weight that you can't control (such as medication side effects)

# Healthy body weight

## Other strategies to consider:

- Re-evaluate your goals regularly
- Reward yourself with non-food items
- Get rid of “I should” and replace with “I choose to”
- Manage your daily stress
- Get a good night’s sleep
- Use a buddy system

# Key messages

Develop a plan to:

- Make healthy food choices
- Get adequate amounts of calcium and vitamin D to protect your bones
- Do some form of exercise daily
- Be mindful and maintain a positive attitude
- Manage stress

# Resources

Arthritis Consumer Experts

[www.jointhealth.org](http://www.jointhealth.org)

The Arthritis Foundation

[www.arthritis.org](http://www.arthritis.org)

The Arthritis Society

[www.arthritis.ca](http://www.arthritis.ca)

Canadian Arthritis Patient Alliance

[www.arthritispatient.ca](http://www.arthritispatient.ca)

Canadian Psoriasis Network

[www.cpn-rcp.com](http://www.cpn-rcp.com)

Canadian Spondylitis Association

[www.spondylitis.ca](http://www.spondylitis.ca)

Rheuminfo

[www.rheuminfo.com](http://www.rheuminfo.com)

Canadian Medical Association

[www.cma.ca](http://www.cma.ca)

Canadian Nurses Association

[www.cna-nurses.ca/cna](http://www.cna-nurses.ca/cna)

Canadian Association of Occupational Therapists

[www.caot.ca](http://www.caot.ca)

Canadian Physiotherapy Association

[www.thesehands.ca](http://www.thesehands.ca)

Dietitians of Canada

[www.dietitians.ca](http://www.dietitians.ca)

# Resources

Alberta Health Services

<https://www.albertahealthservices.ca/nutrition/Page2914.aspx>

BC Nutrition Resources

[www.healthlinkbc.ca/healthy-eating](http://www.healthlinkbc.ca/healthy-eating)

Canada's Food Guide- Health Canada

<https://food-guide.canada.ca/en/>

Canadian Diabetes Association

[www.diabetes.ca](http://www.diabetes.ca)

Heart & Stroke Foundation

[www.heartandstroke.ca](http://www.heartandstroke.ca)

Intuitive Eating

[www.intuitiveeating.org](http://www.intuitiveeating.org)

Nutrition Analysis

[www.nutritiondata.com](http://www.nutritiondata.com)

Osteoporosis Canada

[www.osteoporosis.ca](http://www.osteoporosis.ca)

Recipes

[www.cookspiratin.com](http://www.cookspiratin.com)

Weight Management

[www.weightymatters.ca](http://www.weightymatters.ca)