

Quiz Policies

Eligibility

The NCSF online quizzes are open to any currently certified fitness professional, 18 years or older.

Deadlines

Course completion deadlines correspond with the NCSF Certified Professionals certification expiration date. Students can obtain their expiration dates by reviewing either their certification diploma or certification ID card.

Cancellation/Refund

All NCSF continued education course studies are non-refundable.

General Quiz Rules

- You may not have your quiz back after sending it in.
- Individuals can only take a specific quiz once for continued education units.
- Impersonation of another candidate will result in disqualification from the program without refund.

Disqualification

If disqualified for any of the above-mentioned reasons you may appeal the decision in writing within two weeks of the disqualification date.

Reporting Policy

You will receive your scores within 4 weeks following the quiz. If you do not receive the results after 4 weeks please contact the NCSF Certifying Agency.

Re-testing Procedure

Students who do not successfully pass an online quiz have the option of re-taking. The fees associated with this procedure total \$15 (U.S) per request. There are no limits as to the number of times a student may re-test.

Special Needs

If special needs are required to take the quiz please contact the NCSF so that appropriate measures can be taken for your consideration.

Quiz Rules

What Do I Mail Back to the NCSF?

Students are required to submit the quiz answer form.

What do I Need to Score on the Quiz?

In order to gain the .5 NCSF continued education units students need to score 80% (8 out of 10) or greater on the CEU quiz.

Where Do I Mail My Quiz Answer Form?

You will mail your completed answer form to:

NCSF

Attn: Dept. of Continuing Education

5915 Ponce de Leon Blvd., Suite 60

Coral Gables, FL 33146

How Many CEUs Will I Gain?

Professionals who successfully complete the any continuing education quiz will gain .5 NCSF CEUs per quiz.

How Much does each quiz cost?

Each quiz costs the student \$15.00.

What Will I Receive When The Course Is Completed?

Students who successfully pass any of the NCSF online quizzes will receive their exam scores, and a confirmation letter.

How Many Times Can I Take The Quizzes For CEUs?

Individuals can take each NCSF quiz once for continuing education credits.

Inflammatory Dynamics and Nutrient Intake

The correlating factors behind systemic inflammatory dynamics and various lifestyle behaviors such as physical activity and diet are presently a topic of significant interest to scientists and health experts. This interest has spilled over to the general public as evident by an increase in anti-inflammatory products like omega-3 fatty acid supplements. Most individuals are familiar with the classic signs of injury-related inflammation including; redness, swelling, pain, loss of function, and heat at the site of a given wound. In modern research, significant focus has shifted from acute inflammatory response to chronic low grade inflammation associated with android obesity, physical inactivity, and poor dietary sources. Chronic systemic inflammation is now associated with premature aging, autoimmune disorders and several epidemiological ailments including diabetes, heart disease, and kidney disease. Systemic inflammation is heavily affected by behaviors and may be promoted or diminished through intricate dynamics related to body composition, nutritional choices, physical activity levels, hormonal balance, and stress.

A recent study in the *Journal of Clinical Endocrinology and Metabolism* examined the effects of dietary intake on systemic inflammation in humans. Researchers from the Mount Sinai School of Medicine investigated the link between consuming a toxin known as advanced glycation end products (AGEs) and levels of oxidant stress and systemic inflammation.

AGEs are found in great abundance in processed and fried food products. In the study, 49 participants were provided with either an isocaloric low-AGE (30-50% reduction) or a regular diet for a period of between 4 weeks to 4 months. Participants who engaged in the intervention for 4 weeks were current chronic kidney disease patients, while healthy adults maintained their assigned diet for a full 4 months. The findings revealed that consuming reduced quantities of AGEs in the diet reduced oxidant stress and systemic inflammation, regardless of age or current health status. The noteworthy implication of this finding is that simple modifications to the diet can improve health outcomes and future medical costs.

Estimates suggest that anti-inflammatory food consumption is significantly below the necessary levels to offset pro-inflammatory eating. Different cites have indicated when omega 3 fatty acids (anti-inflammatory) are compared to omega-6 fatty acids in the average American diet the ration is heavily one sided, pro-inflammatory. The ideal ratio would be at about 1:6-10 (anti:pro) but many Americans experience a consumption ratio closer to 1:25-40. This suggests the average person in the United States promotes pro-inflammatory conditions, anecdotally explaining the rise in metabolic disease.

Quick Facts for Pro-inflammatory***Nutrition***

Oftentimes, the first step to take when making lifestyle or nutritional modifications is to become educated as to the positive and negative factors that affect the outcome. In many cases it is easier to cut or reduce negatives than add positives so first scrutinize what shouldn't be done. A straightforward approach in this scenario would be to examine the foods that actually promote inflammation. As revealed in the previous study, processed and fried foods promote systemic inflammation through

increased presence of AGEs and reduction of specific internal antioxidants such as AGE receptor-1 (AGER1). As a rule of thumb, if a food contains high amounts of flour, starch, sugar, or another sweetener; it has pro-inflammatory properties. It also appears that red meats can have an effect on inflammatory markers likely due to the saturated fat content. The following table provides some common examples of foods to avoid if one is attempting to reduce pro-inflammatory foods in the diet. In many cases these are foods most people know they should consume in moderation or not at all.

Table 1.1 Pro-inflammatory Food Product Examples

White Bagels	White Bread	Candy	Cake	Cookies
Cereals (many)	Cornstarch	Corn Bread	Crackers	Croissants
Doughnuts	Egg Rolls	French Fries	Fruit Juice	Granola Bars
Hard Cheese	Honey	Hot Dogs	Ice Cream	Margarine
Muffins	Pasta (many)	Pancakes	Pita bread	Pizza
Popcorn	Potatoes	Pudding	Relish	Rice
Sherbert	Snack Foods	Soda	Tacos	Tortillas
Waffles	Shortening	Pie	Red Meat	Jams

In many of the foods that appear in the table the amount of processing that occurs to the ingredients determines the level of pro-inflammatory activity in the body when they are consumed. For instance, a whole wheat product would likely be less inflammatory than the same food made with bleached flour.

Quick facts for Anti-inflammatory***Nutrition***

It is generally accepted that complementing the diet with foods that reduce inflammation

will improve how an individual feels through enhanced immune function and pain reduction, decrease the risk for chronic diseases, and thwart premature aging (at least to some extent). Choosing the right kinds of dietary fats and oils, protein, carbohydrate and fiber sources, and beverages can potentially reduce systemic inflammation. As previously mentioned, foods high in omega-3 fatty acids can be powerful anti-inflammatory agents. Various types of fish, nuts, seeds, and supplements can be consumed to attain useable quantities

of this protective fat. With protein, it is prudent to stick with leaner animal sources, soybeans, tofu, and soy milk. Most of the carbohydrates in the diet should come from whole grains, vegetables, and fruits. Breads, cereals, and pasta should be primarily whole grain products; as high fiber can also have

an effect on inflammation. Optimal beverage choices include plain drinking water, 100% fruit juices, herbal teas, vegetable juices, and low fat milk. The following table provides some optimal anti-inflammatory food products that may benefit the dietary strategy.

Table 1.2 Anti-inflammatory Food Product Examples

Vegetables	Fruits	Herbs & Spices	Nuts, Oils, & Seeds	Fish
Bell Peppers	Apples	Basil	Avocado Oil	Cod
Broccoli	Avocados	Cayenne Pepper	Extra Virgin Olive Oil	Halibut
Cabbage	Berries	Cinnamon	Almonds	Herring
Collards	Pineapple	Cloves	Flaxseed	Oysters
Garlic	Guavas	Cocoa	Hazelnuts	Trout
Green Beans	Kiwifruit	Mint	Sunflower Seeds	Salmon
Kale	Lemons/Limes	Oregano	Walnut	Sardines
Olives	Oranges	Parsley		Snapper
Spinach	Papaya	Rosemary		Bass
Sweet Potatoes	Rhubarb	Thyme		Tuna
Turnip Greens	Tomatoes	Tumeric		Whitefish

Analysis of the anti-inflammatory table suggests healthy eating is not rocket science and not ground breaking either. The classic approach of consuming fruits, vegetables, legumes, plant oils and cold water fish for disease prevention seems to hold true for anti-inflammatory response as well, or was this the answer all along? It appears that lowered AGE consumption associated with processed and fried foods, along with the incorporation of antioxidant-rich nutrient sources can have a significant positive impact on health. Due to the fact that systemic inflammation stands as a large

precursor for many epidemic disorders including the metabolic syndrome, preventative dietary measures could be a viable means for reducing the startling prevalence seen in the general population today. Conveniently, it is a measure that nearly anyone can implement with tangible positive outcomes. Of important note, moderate exercise mediates inflammatory cytokines. Therefore adding routine physical activity along with dietary adjustments can go a long way with little effort.

Inflammatory Dynamics and Nutrient Intake

CEU Quiz

1. Which of the following is a sign of injury-related inflammation?
 - a. Heat at the site of injury
 - b. Pain
 - c. Loss of function
 - d. All of the above are correct
2. Chronic low grade inflammation is associated with _____ and _____.
 - a. Physical activity; poor diet
 - b. Healthy diet; physical activity
 - c. Physical inactivity; poor diet
 - d. Physical inactivity; healthy diet
3. Advanced Glycation End Products (AGEs) are found in great abundance in _____.
 - a. High fiber foods
 - b. Fruits and vegetables
 - c. Fish
 - d. Fried and processed foods
4. According to the research published in the Journal of Clinical Endocrinology and Metabolism, individuals were able to reduce oxidant stress and systemic inflammation, by _____.
 - a. Exercising at a lower intensity
 - b. Eating fewer, larger meals throughout the day
 - c. Consuming less AGEs in their diet
 - d. Focusing on the timing of their meals
5. _____ fatty acids are considered to be anti-inflammatory.
 - a. Omega 3
 - b. Omega 6
 - c. Trans
 - d. Saturated

6. Foods containing high amounts of flour, starch, or sugar generally have pro-inflammatory properties.
 - a. True
 - b. False

7. Which of the following modifications would result in a reduced inflammatory response based on the chart/information from the article?
 - a. Doughnuts instead of muffins
 - b. Cookies instead of cake
 - c. Whole wheat pasta instead of regular pasta
 - d. Waffles instead of pancakes

8. Enhanced immune function, pain reduction, and decreased risk for chronic disease are attributed to a diet designed to _____.
 - a. Reduce inflammation
 - b. Increase inflammation
 - c. Increase AGEs intake
 - d. Decrease fruit and vegetable intake

9. Healthy diets should provide for the vast majority of carbohydrates to come from _____?
 - a. Vegetables and whole grains
 - b. Red meat and fried foods
 - c. Candies and sweets
 - d. It doesn't matter where the carbohydrates come from

10. Due to systemic inflammation's role in metabolic disease, a diet high in _____ that promotes an anti-inflammatory response, coupled with increased physical activity is the ideal recipe for the general population.
 - a. Fruits and vegetables
 - b. Cold water fish
 - c. Plant oils and legumes
 - d. All of the above should be included

Quiz Answer Form

FIRST NAME _____ LAST NAME _____ M.I. _____

TITLE _____

ADDRESS _____ APT. _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

COUNTRY _____ POSTAL CODE _____

CERTIFICATION NO. _____ CERTIFICATION EXP. ____/____/____

MEMBERSHIP NO. _____ MEMBERSHIP EXP. ____/____/____

Quiz Name	Member Price	Total
	\$15	



Discover



Visa



Mastercard



Amex



Check/Money Order

Account No. _____

Exp. Date _____

Security Code _____

Signature _____

Date _____

Quiz Answers

- | | |
|----------|-----------|
| 1. _____ | 6. _____ |
| 2. _____ | 7. _____ |
| 3. _____ | 8. _____ |
| 4. _____ | 9. _____ |
| 5. _____ | 10. _____ |

Fill in each blank with the correct choice on the answer sheet. To receive 0.5 CEUs, you must answer 8 of the 10 questions correctly.

Please mail this Quiz answer form along with the proper enclosed payment to:

NCSF
5915 Ponce de Leon Blvd., Suite 60
Coral Gables, FL 33146

Questions? 800-772-NCSF