**SUPPLEMENTARY MATERIAL**

# Table S1. Abbreviated dietary assessment

The abbreviated dietary assessment, focused on omega fatty acids, was based on items from the ***Diet Health Questionnaire II, past year, with portion size***.1 This tool asks about consumption over the past 12 months. The items used in the abbreviated dietary assessment are listed below, cross-referenced to the original item number on the paper-based form version of the DHQ II.

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| **DHQ II Item** | **Question** |
| 46a | Which fats were usually added to your vegetables DURING COOKING?  *(Please do not include potatoes.* ***Mark all that apply****.)* |
| 61 | How often did you eat **cooked dried beans** (such as baked beans, pintos, kidney, blackeyed peas, lima, lentils, soybeans, or refried beans)? *(Please do not include bean soups or chili.)* |
| 61a | Each time you ate **beans**, how much did you usually eat? |
| 61b | How often were the beans you ate **refried beans, beans prepared with any type of fat,** or **with meat added**? |
| 78 | How often did you eat **canned tuna** (including in salads, sandwiches, or casseroles)? |
| 78a | Each time you ate **canned tuna**, how much did you usually eat? |
| 78b | How often was the canned tuna you ate **water-packed**? |
| 97 | How often did you eat **fried shellfish** (such as crab, lobster, shrimp)? |
| 97a | Each time you ate **fried shellfish**, how much did you usually eat? |
| 98 | How often did you eat **shellfish** (such as crab, lobster, shrimp) **that was NOT FRIED**? |
| 98a | Each time you ate **shellfish that was NOT FRIED**, how much did you usually eat? |
| 99 | How often did you eat **salmon, fresh tuna or trout**? |
| 99a | Each time you ate **salmon, fresh tuna or trout**, how much did you usually eat? |
| 100 | How often did you eat **fish sticks** or other **fried fish** (not including shellfish)? |
| 100a | Each time you ate **fish sticks or other fried fish**, how much did you usually eat? |
| 101 | How often did you eat **other fish that was NOT FRIED** (not including shellfish)? |
| 101a | Each time you ate **other fish that was NOT FRIED**, how much did you usually eat? |
| 102a | Which of the following **fats** were regularly used to prepare your meat, poultry, or fish? *(****Mark all that apply.****)* |
| 128 | How often did you eat **eggs, egg whites, or egg substitutes** (NOT counting eggs baked in goods and desserts)? *(Please include eggs in salads, quiche, and soufflés.)* |
| 128a | Each time you ate **eggs**, how many did you usually eat? |
| 128b | How often were the eggs you ate **egg substitutes** or **egg whites only**? |
| 128c | How often were the eggs you ate **regular whole eggs**? |
| 128d | How often were the eggs you ate **cooked in oil, butter, or margarine**? |
| 153 | Please mark any of the following **herbal, botanical, or other supplements** you took more than once per week. |

**The following study-specific instruction was given when administering the dietary assessment**:

*To help with serving sizes, think of your hand: your palm is about equal to 3 ounces of meat, fish, or poultry and your fist is about equal to a cup of vegetables or beans.*

1. NCI/Epidemiology & Genomics Research Program. Diet History Questionnaire, Version 2.0. https://epi.grants.cancer.gov/dhq2/forms/. Published 2010. Accessed July 1, 2018.

# Table S2. Results from secondary models that included a covariate for n-3 supplement use (fish oil and/or flaxseed oil) as a binary variable, in addition to all other covariates from the primary models.

Results presented as β coefficient (95% CI), except for the FM Scale (binary outcome) which is expressed as odds ratio (OR) (95% CI).

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| --- | --- | --- | --- |
| *Outcome* | **n-3** | **n-6** | **ratio n-6:n-3** |
| SLAQ | -0.82 (-1.65, -0.002) a | 0.05 (-0.05, 0.15) | 0.34 (0.08, 0.59) b |
| PROMIS Sleep Disturbance | -1.05 (-1.98, -0.12) c | -0.01 (-0.12, 0.10) | 0.21 (-0.08, 0.50) |
| PROMIS Depression | -0.81 (-1.86, 0.23) | -0.04 (-0.16, 0.09) | 0.12 (-0.21, 0.45) |
| FM Scale (positive) | OR 0.82 (0.66, 1.03) | OR 1.01 (0.98, 1.04) | OR 1.06 (0.99, 1.13) |
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| MOS SF-36 subscales |  |  |  |
| *Physical functioning* | 2.12 (-0.86, 5.10) | 0.00 (-0.36, 0.35) | -0.47 (-1.40, 0.47) |
| *Role functioning/physical* | -0.80 (-5.23, 3.63) | 0.11 (-0.41, 0.64) | 0.23 (-1.16, 1.61) |
| *Role functioning/emotional* | 2.56 (-1.98, 7.10) | -0.24 (-0.78, 0.30) | -1.13 (-2.55, 0.29) |
| *Energy/fatigue* | 1.03 (-1.24, 3.29) | -0.01 (-0.28, 0.26) | -0.21 (-0.92, 0.50) |
| *Emotional/well-being* | 0.90 (-1.14, 2.94) | -0.02 (-0.26, 0.22) | -0.22 (-0.86, 0.42) |
| *Social functioning* | 1.51 (-1.53, 4.54) | -0.13 (-0.49, 0.23) | -0.77 (-1.71, 0.18) |
| *Pain* | 2.19 (-0.61, 4.99) | -0.14 (-0.48, 0.19) | -0.74 (-1.61, 0.14) |
| *General health* | 0.78 (-1.71, 3.27) | 0.00 (-0.29, 0.30) | -0.08 (-0.86, 0.70) |
|  |  |  |  |
| LupusQoL domains |  |  |  |
| *Physical health* | 2.27 (-0.48, 5.03) | -0.08 (-0.40, 0.25) | -0.60 (-1.47, 0.26) |
| *Pain* | 2.62 (-0.33, 5.56) | -0.10 (-0.45, 0.25) | -0.66 (-1.58, 0.26) |
| *Planning* | 2.27 (-0.66, 5.21) | -0.19 (-0.54, 0.16) | -0.82 (-1.74, 0.09) |
| *Intimate relationships* | -1.18 (-4.91, 2.54) | -0.01 (-0.45, 0.43) | 0.36 (-0.80, 1.51) |
| *Burden to others* | 1.98 (-1.35, 5.30) | 0.04 (-0.35, 0.44) | -0.41 (-1.45, 0.64) |
| *Emotional health* | 1.61 (-0.46, 3.68) | 0.02 (-0.22, 0.27) | -0.32 (-0.96, 0.33) |
| *Body image* | 1.72 (-0.98, 4.41) | 0.02 (-0.29, 0.33) | -0.49 (-1.32, 0.34) |
| *Fatigue* | 1.91 (-0.82, 4.64) | 0.05 (-0.28, 0.37) | -0.46 (-1.31, 0.40) |
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The n-3 and n-6 fatty acid exposure variables were fat energy-adjusted (g/1000 Kcal). Models adjusted for the following: sex, age, race, body mass index, and omega-3 supplement (fish oil and/or flaxseed oil) use.

Abbreviations: SLAQ = Systemic Lupus Activity Questionnaire; FM = fibromyalgia; PROMIS = Patient-Reported Outcome Measurement Information System; MOS SF-36 = RAND Medical Outcomes Study 36-Item Short-Form Survey Instrument; LupusQoL = Lupus Quality of Life Questionnaire

a p=0.049; b p=0.011; c p=0.027