Relationship between habitual fish intake and markers of metabolic syndrome in a sample of overweight volunteers for a dietary intervention

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Background

- Habitual fish intake associated with improved health outcomes (Mozaffarian et al, 2005)
- Assumed to be due to VLC omega-3 intake
- Whole foods may have added benefits (Jacobs et al, 2009)

Methods and Data Analysis

- N = 56 (14 M, 42 F)
- Overweight participants in dietary intervention trial
- Dietary, anthropometric, biochemical data (baseline)
- Fish (g) classified according to type (oily, lean and total)
- Pearson's Correlation Coefficient

Results

		Oily fish (g)	Lean fish (g)	Total fish (g)
Glucose	Total pop	n/s	p = 0.050	n/s
	Total pop, partial correlation for kJ	n/s	p = 0.082	n/s
	Men (n = 14)	n/s	p = 0.060	n/s
	Men, partial correlation for kJ	n/s	n/s	n/s

		Oily fish (g)	Lean fish (g)	Total fish (g)
Weight	Men (n = 14)	p = 0.062	n/s	p = 0.032
	Men, partial correlation for kJ	n/s	n/s	n/s

Results

		Oily fish (g)	Lean fish (g)	Total fish (g)
Erythrocyte n-3 content	Men (n = 14)	p = 0.093	n/s	n/s
	Men, partial correlation for kJ	n/s	n/s	n/s

		Oily fish (g)	Lean fish (g)	Total fish (g)
Erythrocyte EPA content	Men (n = 14)	p = 0.053	n/s	n/s
	Men, partial correlation for kJ	n/s	n/s	n/s

Discussion

- Weight:
  - Men consumed more kJ
- Glucose:
  - High fat accompanying foods
- n-3 and EPA:
  - Increased impact of confounding variables
- Gender effect

Limitations and Future Directions

- DH – general information
- Small sample size

- Larger sample size and omega-3 data to validate results
- Lifestyle factors associated with increased fish intake

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