

## Fish and shellfish from sustainable fisheries are good sources of n3 fatty acids

S. Wretling, M. Haglund, V. Öhrvik, A-K. Lindroos, I. Mattisson,  
National Food Agency, Uppsala, Sweden

National authorities in several European countries recommend an increased fish consumption, mainly due to the beneficial health effects of n3 fatty acids. However, this advice may be in conflict with sustainable fisheries. Our aim was therefore to evaluate whether the recommended n3 fatty acid intake can be achieved by using sources from sustainable fisheries, only.

Fish and shellfish from sustainable fisheries (n=8 species) and vulnerable fisheries (n=7 species, based on information from World Wide Fund for Nature) were included in the study. Species were selected based on sales data from Swedish retailers. At least 12 individuals from each species were analysed as a composite sample. Seasonal variation and effects of processing were accounted for. Fat content was determined using a gravimetric method and fatty acids were determined using gas chromatography.

Good sources of n3 fatty acids (>0.8 g/100 g fresh weight) were found in sustainable fisheries e.g. herring and blue mussel as well as among the more vulnerable species e.g. sub-arctic char. The best source of n3 fatty acids was pickled herring, contributing with more than 2 g n3 fatty acids/100 g fresh weight. Thereby 3 servings (each 40-50 g) of pickled herring a week is within the international acceptable macronutrient distribution range of n3 fatty acids (0.5-2 %E, FAO 2010) and would more than cover the recommended daily intake of n3 fatty acids (1 %E, Nordic Nutrition Recommendations 2004).