

# Habitual dietary omega-3 intakes of UK ethnic minority groups – A pilot systematic review

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There is rising concern that some UK ethnic minority groups (EMG) are experiencing poor health outcomes, which may be linked to diet<sup>(1)</sup>. Furthermore, there is currently a lack of data relating to EMG consumption of long chain omega-3 (*n*-3) polyunsaturated fatty acids (LC3PUFA) which offer a range of health benefits<sup>(2–4)</sup>. UK recommendations state that people should consume one portion of oily fish per week, to give a minimum of 0.2 percent of total energy or 0.45 g/day LC3PUFA<sup>(5)</sup> or 2.2 g/d LC3PUFA when pregnant<sup>(4)</sup>. An official nutritional survey that encompasses intakes of specific types of LC3PUFA in EMG's has not yet been undertaken. However, general national surveys have been published in the form of the Low Income Diet and Nutrition Survey (LINDS), which encompasses some information relating to EMG's.

In this preliminary study, a search was made using defined criteria to identify published data relating to the dietary LC3PUFA intakes of EMG between 2004 and 2014. Studies included data from UK EMG such as black African and Caribbean, South Asian, Indian Asian Sikhs and other mixed race groups. Published data on the LC3PUFA intakes of EMG in the form of the NDNS<sup>(2)</sup>, LINDS<sup>(3)</sup> and three further peer review journal articles were identified<sup>(6–8)</sup>.

Study	Population group	Sample size	Intake and dietary source
UK, NDNS <sup>(1)</sup>	General population	3073	8 g/d oily fish
UK, LINDS <sup>(2)</sup>	Low income populations	3728	6 g/d oily fish
	Black men	42	1.9 g/d <i>n</i> -3 fatty acids
	Asian men	97	2.0 g/d <i>n</i> -3 fatty acids
	Other ethnic group men	56	1.8 g/d <i>n</i> -3 fatty acids
	Black women	70	1.5 g/d <i>n</i> -3 fatty acids
	Asian women	141	1.8 g/d <i>n</i> -3 fatty acids
	Other ethnic group women	70	1.8 g/d <i>n</i> -3 fatty acids
UK children as part of the CHASE study <sup>(3)</sup>	White European	512	<i>n</i> -6: <i>n</i> -3 8.0*
	Black African	285	<i>n</i> -6: <i>n</i> -3 8.1*
	Black Caribbean	188	<i>n</i> -6: <i>n</i> -3 7.7*
	South Asian	534	<i>n</i> -6: <i>n</i> -3 8.4*
	Other (Mixed origin)	507	<i>n</i> -6: <i>n</i> -3 8.9*
Pregnant UK women with and without gestational diabetes mellitus (GDM) <sup>(4)</sup>	Pregnant Afro Caribbean	8	1.24 g/d ALA, 0.21 g/d EPA, 0.16 g/d DHA, 1.68 g/d total <i>n</i> -3
	Pregnant Afro Caribbean with GDM	23	1.25 g/d ALA, 0.20 g/d EPA, 0.24 g/d DHA, 1.80 g/d total <i>n</i> -3
British Indo-Asians <sup>(5)</sup>	British Indian Asian Sikhs	40	1.7 mg/d ALA, 68 mg/d EPA, 112 mg/d DHA

\* values are geometric means for log-transformed variables

There is a limited amount of data relating to the dietary LC3PUFA intakes of EMG living in the UK and previous surveys have used relatively small numbers of participants. Results from existing studies are varied; however most lack the finer detail regarding the types of LC3PUFA that are being consumed. Further research is warranted in the form of larger dietary surveys to ascertain the individual LC3PUFA and oily fish intakes of UK EMG.

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