

## **Supplementary Appendix**

This supplement was provided by the authors to give further information on the analyses.

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**Supplementary Appendix**

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Table S1

Table S1. Numerical code of the medication		
Medication	Specification	Included Code
Aspirin*		1140909772, 1140861804, 1140868226, 1140861806, 1140882392, 1140882268, 1140882108, 1140882190, 1140868282, 1140872040, 1141163138, 1141167848, 1140909888, 1140871080, 1140925942, 1140923344, 1140856336, 1141167844, 1140861808, 1140882192, 1141151924, 1140868264, 1140882106, 1140856394, 1141164050, 1141164044, 1140856314, 1140863514, 1140856220, 1141177826, 1140872032, 1140864860, 1140856212, 1141188536, 1140917408, 1140868294, 1140856440, 1140856214, 1140856344
Biguanide*	Metformin	1140921964, 1140874686, 1140884600, 1141189090, 1141153138
Insulin		1140883066
Omega-3		1140861884, 1141181868, 1193, 1140909674
Statin	Atorvastatin, Fluvastatin, Pravastatin, Rosuvastatin, Simvastatin	1141146234, 1141192414, 1140910632, 1140888594, 1140864592, 1141146138, 1140861970, 1140888648, 1141195196, 1141192410, 1141188146, 1140861958, 1140910652, 1140910654, 1140881748, 1141200040
Multivitamin Supplements*		1140870488,1140858368,1140877706,1141164602,1140876592,1140852976,1140909766,1141167678,1140852916,1140852920,1140871060,1140871162,1141173902
Vitamin C Supplement*		1140909730,1140858300,1140858370,1140852900,1140870786,1140852870,1140852872,1140852908,1140870492,1140852910,1140870946,1140911682,1140852918
Vitamin B12 Supplement*		1140870508,1140870512,1140870516,1140870520,1140858304,1140858306,1140858452,1141173348,1140870504,1140852900,1140852870,1140870492,1140852918

\*Combined preparations possible. Particularly in the case of combined nutritional supplements, there can be an overlap of numerical codes.

Table S2

Table S2. Metabolic profile $\omega$ -3 users		
	beta	$-\log_{10}(\text{p-value})$
Phosphoglycerides	0.004	1.607
Sphingomyelins	0.011	10.238
ApoB	0.017	10.723
ApoA1	-0.001	0.157
Total Fatty Acids	0.002	0.374
Omega-3 Fatty Acids	0.125	161.574
Omega-6 Fatty Acids	0.002	0.693
PUFA	0.015	16.439
MUFA	-0.016	5.744
Saturated Fatty Acids	-0.003	0.525
Linoleic Acid	0.000	0.077
Docosahexaenoic Acid	0.115	203.450
Albumin	0.007	10.320
Glycoprotein Acetyls	-0.010	9.137
Concentration of Large VLDL Particles	0.002	0.099
Total Lipids in Large VLDL	0.005	0.407
PL in Large VLDL	-0.004	0.268
C in Large VLDL	0.009	0.999
TG in Large VLDL	0.006	0.528
Concentration of Medium VLDL Particles	0.019	6.076
Total Lipids in Medium VLDL	0.017	4.788
PL in Medium VLDL	0.020	5.641
C in Medium VLDL	0.029	11.189
TG in Medium VLDL	0.009	1.308
Concentration of Small VLDL Particles	0.011	2.562
Total Lipids in Small VLDL	0.012	2.998
PL in Small VLDL	0.017	6.237
C in Small VLDL	0.018	5.922
TG in Small VLDL	0.002	0.234
Concentration of Large LDL Particles	0.017	9.941
Total Lipids in Large LDL	0.021	14.731
PL in Large LDL	0.021	15.576
C in Large LDL	0.023	16.489
TG in Large LDL	-0.006	1.428
Concentration of Medium LDL Particles	0.024	16.157
Total Lipids in Medium LDL	0.022	12.870
PL in Medium LDL	0.021	12.378
C in Medium LDL	0.025	14.908
TG in Medium LDL	-0.007	1.215
Concentration of Small LDL Particles	0.016	10.742
Total Lipids in Small LDL	0.018	12.024
PL in Small LDL	0.018	14.456
C in Small LDL	0.020	13.362
TG in Small LDL	-0.010	1.872
Concentration of Large HDL Particles	0.006	0.641
Total Lipids in Large HDL	0.004	0.364
PL in Large HDL	0.001	0.114
C in Large HDL	0.008	0.880
TG in Large HDL	-0.014	2.682
Concentration of Medium HDL Particles	-0.003	0.543

Total Lipids in Medium HDL	-0.004	1.197
PL in Medium HDL	-0.006	2.173
C in Medium HDL	-0.001	0.129
TG in Medium HDL	-0.019	5.888
Concentration of Small HDL Particles	0.003	1.532
Total Lipids in Small HDL	-0.001	0.268
PL in Small HDL	-0.003	1.418
C in Small HDL	0.004	1.909
TG in Small HDL	-0.013	3.300
Abbreviations: C, Cholesterol; TG, Triglycerides; PL, Phospholipids; VLDL, Very-low-density lipoprotein; LDL, Low-density lipoprotein; HDL, High-density lipoprotein; ApoB, Apolipoprotein B; ApoA1, Apolipoprotein A1; PUFA, Polyunsaturated fatty acids; MUFA, Monounsaturated fatty acids.		

Table S3

<b>Table S3. Associations of Omega-3 intake in patients with lipiodomic data in UKB</b>			
<b>Incident Liver disease (K70-K77)</b>	<b>No Omega-3 intake (N=82,218)</b>	<b>Omega-3 intake (N=8,747)</b>	
No diagnosis (K70-K77)	81,371/82,218	8666/8747	
Diagnosis (K70-K77)	847/82,218	81/8747	
	<b>No. with Event/ No.*</b>	<b>Hazard Ratio (95% CI)</b>	<b>p-value</b>
	<b>Incident Liver Disease**</b>		
<b>Overall</b>	81/8747	<b>0.726 (0.573 to 0.921)</b>	<b>8.0e-03</b>
<b>in Men***</b>	40/3527	0.83 (0.60 to 1.17)	0.29
<b>in Women***</b>	41/5220	<b>0.653 (0.467 to 0.912)</b>	<b>1.2e-02</b>
<b><i>PNPLA3</i> rs738409 (wt)</b>	47/5383	<b>0.729 (0.533 to 0.997)</b>	<b>4.8e-02</b>
<b><i>PNPLA3</i> rs738409 (het)</b>	2/2896	0.69 (0.46 to 1.04)	0.08
<b><i>PNPLA3</i> rs738409 (hom)</b>	7/404	0.98 (0.42 to 2.32)	0.96
<b><i>TM6SF2</i> rs58542926 (wt)</b>	73/7443	<b>0.769 (0.598 to 0.989)</b>	<b>4.1e-02</b>
<b><i>TM6SF2</i> rs58542926 (het)</b>	8/1176	0.59 (0.28 to 1.24)	0.17
<b><i>TM6SF2</i> rs58542926 (hom)</b>	0/54	-	-
<b><i>HSD17B13</i> rs72613567 (wt)</b>	38/4598	<b>0.670 (0.475 to 0.945)</b>	<b>2.2e-02</b>
<b><i>HSD17B13</i> rs72613567 (het)</b>	38/3443	0.82 (0.58 to 1.17)	0.27
<b><i>HSD17B13</i> rs72613567 (hom)</b>	4/625	0.54 (0.19 to 1.54)	0.25
<b><i>MTARC1</i> rs2642438 (wt)</b>	37/4289	0.75 (0.53 to 1.07)	0.11
<b><i>MTARC1</i> rs2642438 (het)</b>	38/3637	0.75 (0.53 to 1.07)	0.11
<b><i>MTARC1</i> rs2642438 (hom)</b>	6/754	0.58 (0.24 to 1.39)	0.23