

Circulating Endocannabinoids and Cognitive Function in Older Adults

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Supplementary Table 1. list of the eCB compounds and their classification and abbreviations.

| General family | Lipid class | Endocannabinoids |
|--------------------|---|--|
| Fatty Acids | Fatty Acids (FAs) | Arachidonic acid (AA) Docosahexaenoic acid (DHA) Eicosapentaenoic acid (EPA) Linoleic acid (LA) Linolenic acid (LnA) Oleic acid (OA) Palmitic acid (PA) Stearic acid (SA) |
| Monoglycerides | 2-Monoacyl glycerols (2-MAGs) | 2&1-Arachidonoyl glycerol (2-AG) 2&1-Docosahexaenoyl glycerol (2-DHG) 2&1-Linolenoyl glycerol (2-LnG) 2&1-Oleoyl glycerol (2-OG) 2&1-Palmitoyl glycerol (2-PG) 2&1-Stearoyl glycerol (2-SG) |
| Fatty acid amides | N-acyl ethanolamides (N-EAs) (Fatty acid ethanolamides) | Arachidonoyl ethanolamide (AEA) Docosahexaenoyl ethanolamide (DHEA) Linoleoyl ethanolamide (LEA) Oleoyl ethanolamide (OEA) Palmitoyl ethanolamide (PEA) Stearoyl ethanolamide (SEA) |
| | N-acyl amides (N-Ams) (Fatty acid primary amides) | N-Linolenoyl amide (Ln-Am) N-Linoleoyl amide (L-Am) N-Palmitoyl amide (P-Am) |
| N-Acyl Amino Acids | N-acyl serines (N-Sers) | N-Arachidonoyl serine (A-Ser) N-Linoleoyl serine (L-Ser) N-Oleoyl serine (O-Ser) N-Palmitoyl serine (P-Ser) |
| | N-acyl glycines (N-Glys) | N-Arachidonoyl glycine (A-Gly) N-Docosahexaenoyl glycine (DH-Gly) N-Linoleoyl glycine (L-Gly) N-Oleoyl glycine (O-Gly) N-Palmitoyl glycine (P-Gly) N-Stearidonoyl glycine (S-Gly) |
| | N-acyl alanines (N-Alas) | N-Linoleoyl alanine (L-Ala) N-Oleoyl alanine (O-Ala) N-Palmitoyl alanine (P-Ala) |
| | N-acyl leucines (N-Leus) | N-Arachidonoyl leucine (A-Leu) N-Docosahexaenoyl leucine (DH-Leu) N-Linoleoyl leucine (L-Leu) N-Oleoyl leucine (O-Leu) N-Palmitoyl leucine (P-Leu) |
| | N-acyl valines (N-Vals) | N-Linoleoyl valine (L-Val) N-Oleoyl valine (O-Val) |
| | N-acyl phenylalanines (N-Phes) | N-Linoleoyl phenylalanine (L-Phe) |

Supplementary Table 2. Main characteristics of the study sample and participants not included in the analyses

| Variables | Included random sample N=237 | Not included* N=509 |
|----------------------------|---|--------------------------------|
| Age, y | 73.3 ±6.2 | 72.8±5.8 |
| Sex (men) | 95 (40.1) | 241 (47.4) |
| Education (college) | 165 (69.6) | 149 (29.3) |
| Apolipoprotein ε4 genotype | 46 (19.8) | 118 (23.9) |
| Obesity | 64 (27.0) | 157 (31.3) |

Continuous values are reported as mean ±SD and dichotomous values are reported as N (%).

*Offspring cohort participants who attended exam nine but were not included in the study

SUPPLEMENTARY DATA

Supplementary Table 3. Associations between levels of each of the 44 eCBs compounds and cognitive function in the total sample.

| Endocannabinoids | Abbreviation | Outcomes | Crude model | | | | | Adjusted model | | | | |
|------------------------------|--------------|---------------|-------------|--------------------|----------------|-------------|-------------|----------------|--------------------|----------------|-------------|-------------|
| | | | N | Parameter Estimate | Standard Error | raw P-value | FDR p-value | N | Parameter Estimate | Standard Error | raw P-value | FDR P-value |
| arachidonic acid | AA | Verbal memory | 231 | -0.0020 | 0.0034 | 0.5603 | 0.7953 | 226 | -0.0020 | 0.0034 | 0.5621 | 0.8600 |
| docosahexaenoic acid | DHA | Verbal memory | 231 | -0.0012 | 0.0035 | 0.7309 | 0.8675 | 226 | -0.0031 | 0.0035 | 0.3749 | 0.7172 |
| eicosapentaenoic acid | EPA | Verbal memory | 229 | 0.0002 | 0.0073 | 0.9751 | 0.9751 | 224 | -0.0019 | 0.0074 | 0.8021 | 0.8823 |
| linoleic acid | LA | Verbal memory | 231 | -0.0015 | 0.0009 | 0.0863 | 0.3797 | 226 | -0.0017 | 0.0009 | 0.0697 | 0.4296 |
| linolenic acid | LnA | Verbal memory | 231 | -0.0029 | 0.0018 | 0.1030 | 0.3945 | 226 | -0.0040 | 0.0018 | 0.0292 | 0.3212 |
| oleic acid | OA | Verbal memory | 231 | -0.0008 | 0.0006 | 0.1807 | 0.5679 | 226 | -0.0010 | 0.0006 | 0.1293 | 0.5031 |
| palmitic acid | PA | Verbal memory | 231 | -0.0012 | 0.0012 | 0.3031 | 0.6351 | 226 | -0.0007 | 0.0012 | 0.5536 | 0.8600 |
| stearic acid | SA | Verbal memory | 231 | 0.0003 | 0.0012 | 0.8044 | 0.9075 | 226 | 0.0015 | 0.0012 | 0.2054 | 0.5982 |
| arachidonoyl ethanolamide | AEA | Verbal memory | 230 | -4.9454 | 4.5781 | 0.2812 | 0.6351 | 225 | -3.1956 | 4.6372 | 0.4915 | 0.8600 |
| docosahexaenoyl ethanolamide | DHEA | Verbal memory | 231 | -2.0984 | 2.8266 | 0.4586 | 0.7157 | 226 | -3.1278 | 2.9219 | 0.2856 | 0.5984 |
| linoleoyl ethanolamide | LEA | Verbal memory | 230 | -2.0348 | 2.7236 | 0.4558 | 0.7157 | 225 | -0.7093 | 2.8188 | 0.8016 | 0.8823 |
| oleoyl ethanolamide | OEA | Verbal memory | 230 | -1.7417 | 1.6259 | 0.2852 | 0.6351 | 225 | -2.0127 | 1.7075 | 0.2398 | 0.5982 |
| palmitoyl ethanolamide | PEA | Verbal memory | 231 | -1.1906 | 1.1291 | 0.2928 | 0.6351 | 226 | -0.6797 | 1.1850 | 0.5668 | 0.8600 |
| stearoyl ethanolamide | SEA | Verbal memory | 231 | -1.5047 | 1.7431 | 0.3889 | 0.7130 | 226 | -0.7427 | 1.7844 | 0.6777 | 0.8770 |
| docosahexaenoyl glycerol 2&1 | 2-DHG | Verbal memory | 228 | 1.1255 | 0.8849 | 0.2047 | 0.6005 | 223 | 0.4499 | 0.8972 | 0.6166 | 0.8770 |
| linolenoyl glycerol 2&1 | 2-LnG | Verbal memory | 229 | -0.1724 | 1.0435 | 0.8689 | 0.9103 | 225 | -0.0577 | 1.0462 | 0.9561 | 0.9561 |
| oleoyl glycerol 2&1 | 2-OG | Verbal memory | 226 | -0.0479 | 0.2173 | 0.8258 | 0.9084 | 222 | 0.0578 | 0.2178 | 0.7911 | 0.8823 |
| palmitoyl glycerol 2&1 | 2-PG | Verbal memory | 231 | 0.0240 | 0.0296 | 0.4184 | 0.7157 | 226 | 0.0322 | 0.0293 | 0.2719 | 0.5982 |
| stearoyl glycerol 2&1 | 2-SG | Verbal memory | 229 | 0.0050 | 0.0083 | 0.5496 | 0.7953 | 224 | 0.0083 | 0.0082 | 0.3098 | 0.6196 |
| linoleoyl alanine | L-Ala | Verbal memory | 230 | -36.7372 | 16.1841 | 0.0241 | 0.1914 | 225 | -25.5973 | 17.1107 | 0.1361 | 0.5031 |
| oleoyl alanine | O-Ala | Verbal memory | 230 | -7.5252 | 3.0352 | 0.0139 | 0.1562 | 225 | -7.2694 | 3.1499 | 0.0220 | 0.3212 |
| palmitoyl alanine | P-Ala | Verbal memory | 230 | -16.5105 | 7.3705 | 0.0261 | 0.1914 | 225 | -13.9633 | 7.7701 | 0.0737 | 0.4296 |
| linolenoyl amide | Ln-Am | Verbal memory | 228 | -1.5846 | 0.4468 | 0.0005 | 0.0110 | 223 | -1.4449 | 0.4414 | 0.0012 | 0.0264 |
| linoleoyl amide | L-Am | Verbal memory | 229 | -0.1687 | 0.0463 | 0.0003 | 0.0110 | 224 | -0.1623 | 0.0453 | 0.0004 | 0.0176 |
| palmitoyl amide | P-Am | Verbal memory | 229 | -0.0547 | 0.0293 | 0.0633 | 0.3134 | 224 | -0.0435 | 0.0292 | 0.1372 | 0.5031 |
| linoleoyl glycine | L-Gly | Verbal memory | 230 | -4.6634 | 2.8864 | 0.1076 | 0.3945 | 225 | -3.8958 | 2.9473 | 0.1876 | 0.5982 |
| oleoyl glycine | O-Gly | Verbal memory | 231 | -2.4834 | 1.3348 | 0.0641 | 0.3134 | 226 | -2.4989 | 1.4117 | 0.0781 | 0.4296 |
| palmitoyl glycine | P-Gly | Verbal memory | 231 | -1.3712 | 0.7096 | 0.0545 | 0.3134 | 226 | -1.2212 | 0.7380 | 0.0994 | 0.4860 |
| linoleoyl leucine | L-Leu | Verbal memory | 229 | 1.4489 | 4.5257 | 0.7492 | 0.8675 | 224 | 2.0411 | 4.8439 | 0.6739 | 0.8770 |
| oleoyl leucine | O-Leu | Verbal memory | 229 | -0.6585 | 1.5078 | 0.6627 | 0.8675 | 224 | -0.5461 | 1.5910 | 0.7318 | 0.8823 |
| palmitoyl leucine | P-Leu | Verbal memory | 230 | -3.9535 | 9.9384 | 0.6911 | 0.8675 | 225 | 1.7256 | 10.8074 | 0.8733 | 0.9149 |
| linoleoyl serine | L-Ser | Verbal memory | 231 | -5.6037 | 7.7728 | 0.4717 | 0.7157 | 226 | -3.7543 | 7.8043 | 0.6310 | 0.8770 |
| oleoyl serine | O-Ser | Verbal memory | 230 | -1.5897 | 2.9721 | 0.5933 | 0.8158 | 225 | -1.9275 | 3.0705 | 0.5308 | 0.8600 |
| palmitoyl serine | P-Ser | Verbal memory | 231 | -0.8117 | 1.9614 | 0.6794 | 0.8675 | 226 | 0.6322 | 2.0434 | 0.7573 | 0.8823 |
| arachidonoyl serine | A-Ser | Verbal memory | 231 | -0.5119 | 0.5765 | 0.3755 | 0.7130 | 226 | -0.1195 | 0.5770 | 0.8361 | 0.8973 |
| linoleoyl phenylalanine | L-Phe | Verbal memory | 231 | 0.6446 | 0.5476 | 0.2403 | 0.6220 | 226 | 0.6222 | 0.5507 | 0.2599 | 0.5982 |

SUPPLEMENTARY DATA

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|------------------------------|--------|---------------|-----|----------|---------|--------|--------|-----|----------|---------|--------|--------|
| arachidonoyl leucine | A-Leu | Verbal memory | 231 | -0.8182 | 0.5429 | 0.1331 | 0.4505 | 226 | -0.6901 | 0.5678 | 0.2256 | 0.5982 |
| docosahexaenoyl leucine | DH-Leu | Verbal memory | 231 | -0.5438 | 0.6106 | 0.3741 | 0.7130 | 226 | -0.7704 | 0.6062 | 0.2051 | 0.5982 |
| arachidonoyl glycine | A-Gly | Verbal memory | 231 | -1.2706 | 0.5143 | 0.0142 | 0.1562 | 226 | -0.9764 | 0.5280 | 0.0658 | 0.4296 |
| docosahexaenoyl glycine | DH-Gly | Verbal memory | 231 | 0.1103 | 0.5897 | 0.8518 | 0.9103 | 226 | 0.2673 | 0.5865 | 0.6491 | 0.8770 |
| stearidonoyl glycine | S-Gly | Verbal memory | 231 | -0.6310 | 0.5358 | 0.2401 | 0.6220 | 226 | -0.6017 | 0.5407 | 0.2670 | 0.5982 |
| linoleoyl valine | L-Val | Verbal memory | 231 | -0.4039 | 0.5228 | 0.4405 | 0.7157 | 226 | -0.1771 | 0.5408 | 0.7436 | 0.8823 |
| oleoyl valine | O-Val | Verbal memory | 231 | -0.0480 | 0.5746 | 0.9335 | 0.9552 | 226 | -0.0727 | 0.5774 | 0.9000 | 0.9209 |
| arachidonoyl glycerol 2&1 | 2-AG | Verbal memory | 231 | 0.1783 | 0.5252 | 0.7346 | 0.8675 | 226 | 0.3635 | 0.5288 | 0.4926 | 0.8600 |
| arachidonic acid | AA | Visual memory | 232 | -0.0030 | 0.0026 | 0.2452 | 0.8283 | 227 | -0.0021 | 0.0026 | 0.4038 | 0.8513 |
| docosahexaenoic acid | DHA | Visual memory | 232 | -0.0025 | 0.0027 | 0.3551 | 0.8283 | 227 | -0.0031 | 0.0026 | 0.2458 | 0.8513 |
| eicosapentaenoic acid | EPA | Visual memory | 230 | -0.0045 | 0.0056 | 0.4259 | 0.8283 | 225 | -0.0044 | 0.0055 | 0.4295 | 0.8513 |
| linoleic acid | LA | Visual memory | 232 | -0.0011 | 0.0007 | 0.1144 | 0.8283 | 227 | -0.0009 | 0.0007 | 0.1733 | 0.8513 |
| linolenic acid | LnA | Visual memory | 232 | -0.0021 | 0.0013 | 0.1221 | 0.8283 | 227 | -0.0019 | 0.0014 | 0.1742 | 0.8513 |
| oleic acid | OA | Visual memory | 232 | -0.0007 | 0.0005 | 0.1174 | 0.8283 | 227 | -0.0006 | 0.0005 | 0.1820 | 0.8513 |
| palmitic acid | PA | Visual memory | 232 | -0.0011 | 0.0009 | 0.2283 | 0.8283 | 227 | -0.0007 | 0.0009 | 0.4390 | 0.8513 |
| stearic acid | SA | Visual memory | 232 | 0.0002 | 0.0009 | 0.8149 | 0.9194 | 227 | 0.0009 | 0.0009 | 0.2829 | 0.8513 |
| arachidonoyl ethanolamide | AEA | Visual memory | 231 | 0.6845 | 3.5058 | 0.8454 | 0.9287 | 226 | 1.6842 | 3.4910 | 0.6300 | 0.8939 |
| docosahexaenoyl ethanolamide | DHEA | Visual memory | 232 | -1.8662 | 2.1486 | 0.3860 | 0.8283 | 227 | -2.4647 | 2.1865 | 0.2609 | 0.8513 |
| linoleoyl ethanolamide | LEA | Visual memory | 231 | -0.7838 | 2.0309 | 0.6999 | 0.9139 | 226 | -0.3765 | 2.0743 | 0.8561 | 0.9659 |
| oleoyl ethanolamide | OEA | Visual memory | 230 | 0.3292 | 1.2305 | 0.7893 | 0.9139 | 225 | 0.5452 | 1.2795 | 0.6704 | 0.8939 |
| palmitoyl ethanolamide | PEA | Visual memory | 231 | -0.2757 | 0.8621 | 0.7495 | 0.9139 | 226 | 0.2057 | 0.8880 | 0.8170 | 0.9460 |
| stearoyl ethanolamide | SEA | Visual memory | 231 | 0.1884 | 1.3502 | 0.8891 | 0.9287 | 226 | 1.2479 | 1.3492 | 0.3560 | 0.8513 |
| docosahexaenoyl glycerol 2&1 | 2-DHG | Visual memory | 229 | -0.4631 | 0.6783 | 0.4954 | 0.9062 | 224 | -0.6142 | 0.6738 | 0.3630 | 0.8513 |
| linolenoyl glycerol 2&1 | 2-LnG | Visual memory | 230 | -0.6712 | 0.8128 | 0.4098 | 0.8283 | 226 | -0.4801 | 0.7915 | 0.5448 | 0.8561 |
| oleoyl glycerol 2&1 | 2-OG | Visual memory | 227 | -0.0603 | 0.1676 | 0.7195 | 0.9139 | 223 | -0.0021 | 0.1626 | 0.9898 | 0.9997 |
| palmitoyl glycerol 2&1 | 2-PG | Visual memory | 232 | 0.0069 | 0.0225 | 0.7589 | 0.9139 | 227 | 0.0068 | 0.0220 | 0.7566 | 0.8997 |
| stearoyl glycerol 2&1 | 2-SG | Visual memory | 230 | 0.0024 | 0.0063 | 0.7048 | 0.9139 | 225 | 0.0023 | 0.0061 | 0.7142 | 0.8997 |
| linoleoyl alanine | L-Ala | Visual memory | 231 | -14.7625 | 12.4113 | 0.2355 | 0.8283 | 226 | -15.1228 | 12.7137 | 0.2355 | 0.8513 |
| oleoyl alanine | O-Ala | Visual memory | 231 | -2.5174 | 2.3347 | 0.2820 | 0.8283 | 226 | -3.0023 | 2.3643 | 0.2055 | 0.8513 |
| palmitoyl alanine | P-Ala | Visual memory | 231 | -10.0860 | 5.6363 | 0.0749 | 0.8283 | 226 | -9.3474 | 5.7805 | 0.1073 | 0.8513 |
| linolenoyl amide | Ln-Am | Visual memory | 229 | -0.3126 | 0.3390 | 0.3574 | 0.8283 | 224 | -0.2249 | 0.3295 | 0.4957 | 0.8513 |
| linoleoyl amide | L-Am | Visual memory | 230 | -0.0280 | 0.0344 | 0.4166 | 0.8283 | 225 | -0.0238 | 0.0332 | 0.4738 | 0.8513 |
| palmitoyl amide | P-Am | Visual memory | 230 | -0.0332 | 0.0217 | 0.1283 | 0.8283 | 225 | -0.0167 | 0.0213 | 0.4341 | 0.8513 |
| linoleoyl glycine | L-Gly | Visual memory | 231 | -2.2450 | 2.2085 | 0.3105 | 0.8283 | 226 | -1.7782 | 2.2261 | 0.4253 | 0.8513 |
| oleoyl glycine | O-Gly | Visual memory | 232 | -1.0413 | 1.0119 | 0.3045 | 0.8283 | 227 | -0.5599 | 1.0612 | 0.5983 | 0.8939 |
| palmitoyl glycine | P-Gly | Visual memory | 232 | -0.1840 | 0.5470 | 0.7369 | 0.9139 | 227 | -0.0002 | 0.5626 | 0.9997 | 0.9997 |
| linoleoyl leucine | L-Leu | Visual memory | 230 | 1.8487 | 3.4681 | 0.5945 | 0.9139 | 225 | -0.2616 | 3.6424 | 0.9428 | 0.9997 |
| oleoyl leucine | O-Leu | Visual memory | 230 | 0.4496 | 1.1584 | 0.6983 | 0.9139 | 225 | -0.5155 | 1.2007 | 0.6681 | 0.8939 |
| palmitoyl leucine | P-Leu | Visual memory | 231 | 11.2349 | 7.5996 | 0.1407 | 0.8283 | 226 | 5.8583 | 8.1301 | 0.4720 | 0.8513 |
| linoleoyl serine | L-Ser | Visual memory | 232 | 1.6000 | 5.9725 | 0.7890 | 0.9139 | 227 | -0.0405 | 5.8974 | 0.9945 | 0.9997 |
| oleoyl serine | O-Ser | Visual memory | 231 | -0.2217 | 2.2873 | 0.9229 | 0.9287 | 226 | -0.8392 | 2.3464 | 0.7210 | 0.8997 |
| palmitoyl serine | P-Ser | Visual memory | 232 | -1.4090 | 1.5067 | 0.3507 | 0.8283 | 227 | -1.5863 | 1.5514 | 0.3077 | 0.8513 |
| arachidonoyl serine | A-Ser | Visual memory | 232 | 0.2186 | 0.4433 | 0.6224 | 0.9139 | 227 | 0.3042 | 0.4320 | 0.4821 | 0.8513 |

SUPPLEMENTARY DATA

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| linoleoyl phenylalanine | L-Phe | Visual memory | 232 | 0.2602 | 0.4193 | 0.5355 | 0.9062 | 227 | 0.2805 | 0.4141 | 0.4989 | 0.8513 |
| arachidonoyl leucine | A-Leu | Visual memory | 232 | 0.2577 | 0.4152 | 0.5353 | 0.9062 | 227 | -0.0360 | 0.4257 | 0.9326 | 0.9997 |
| docosahexaenoyl leucine | DH-Leu | Visual memory | 232 | -0.3692 | 0.4701 | 0.4330 | 0.8283 | 227 | -0.3789 | 0.4588 | 0.4097 | 0.8513 |
| arachidonoyl glycine | A-Gly | Visual memory | 232 | -0.8602 | 0.3933 | 0.0298 | 0.8283 | 227 | -0.6938 | 0.3969 | 0.0819 | 0.8513 |
| docosahexaenoyl glycine | DH-Gly | Visual memory | 232 | -0.1709 | 0.4506 | 0.7049 | 0.9139 | 227 | -0.2822 | 0.4405 | 0.5224 | 0.8513 |
| stearidonoyl glycine | S-Gly | Visual memory | 232 | 0.0365 | 0.4074 | 0.9287 | 0.9287 | 227 | -0.1292 | 0.4021 | 0.7483 | 0.8997 |
| linoleoyl valine | L-Val | Visual memory | 232 | 0.4003 | 0.3990 | 0.3168 | 0.8283 | 227 | 0.2689 | 0.4037 | 0.5061 | 0.8513 |
| oleoyl valine | O-Val | Visual memory | 232 | 0.5048 | 0.4358 | 0.2479 | 0.8283 | 227 | 0.2960 | 0.4320 | 0.4940 | 0.8513 |
| arachidonoyl glycerol 2&1 | 2-AG | Visual memory | 232 | -0.0604 | 0.3998 | 0.8800 | 0.9287 | 227 | 0.1717 | 0.3947 | 0.6641 | 0.8939 |
| arachidonic acid | AA | Abstract reasoning | 235 | -0.0008 | 0.0032 | 0.7928 | 0.9459 | 230 | 0.0000 | 0.0030 | 0.9887 | 0.9887 |
| docosahexaenoic acid | DHA | Abstract reasoning | 234 | 0.0023 | 0.0034 | 0.5037 | 0.8368 | 229 | -0.0001 | 0.0032 | 0.9860 | 0.9887 |
| eicosapentaenoic acid | EPA | Abstract reasoning | 232 | 0.0043 | 0.0071 | 0.5438 | 0.8545 | 227 | 0.0010 | 0.0067 | 0.8830 | 0.9887 |
| linoleic acid | LA | Abstract reasoning | 235 | -0.0008 | 0.0008 | 0.3761 | 0.8368 | 230 | -0.0005 | 0.0008 | 0.5293 | 0.9791 |
| linolenic acid | LnA | Abstract reasoning | 235 | -0.0001 | 0.0017 | 0.9584 | 0.9584 | 230 | 0.0002 | 0.0016 | 0.9124 | 0.9887 |
| oleic acid | OA | Abstract reasoning | 235 | -0.0004 | 0.0006 | 0.5135 | 0.8368 | 230 | -0.0002 | 0.0006 | 0.6948 | 0.9791 |
| palmitic acid | PA | Abstract reasoning | 235 | -0.0013 | 0.0011 | 0.2302 | 0.8368 | 230 | -0.0008 | 0.0011 | 0.4462 | 0.9791 |
| stearic acid | SA | Abstract reasoning | 235 | -0.0015 | 0.0011 | 0.1732 | 0.8368 | 230 | -0.0007 | 0.0010 | 0.5028 | 0.9791 |
| arachidonoyl ethanolamide | AEA | Abstract reasoning | 234 | -1.0038 | 4.4083 | 0.8201 | 0.9496 | 229 | 3.7152 | 4.1743 | 0.3744 | 0.8988 |
| docosahexaenoyl ethanolamide | DHEA | Abstract reasoning | 235 | 2.7370 | 2.6935 | 0.3106 | 0.8368 | 230 | 0.9693 | 2.6234 | 0.7121 | 0.9791 |
| linoleoyl ethanolamide | LEA | Abstract reasoning | 234 | 0.5003 | 2.5629 | 0.8454 | 0.9538 | 229 | 2.3551 | 2.4814 | 0.3436 | 0.8988 |
| oleoyl ethanolamide | OEA | Abstract reasoning | 233 | -0.2594 | 1.5575 | 0.8679 | 0.9547 | 228 | -0.0588 | 1.5382 | 0.9696 | 0.9887 |
| palmitoyl ethanolamide | PEA | Abstract reasoning | 234 | -0.7037 | 1.0721 | 0.5122 | 0.8368 | 229 | 0.2880 | 1.0523 | 0.7846 | 0.9887 |
| stearoyl ethanolamide | SEA | Abstract reasoning | 234 | 0.1628 | 1.6717 | 0.9225 | 0.9584 | 229 | 1.5170 | 1.6059 | 0.3459 | 0.8988 |
| docosahexaenoyl glycerol 2&1 | 2-DHG | Abstract reasoning | 232 | 0.0503 | 0.8497 | 0.9528 | 0.9584 | 227 | -0.3942 | 0.8045 | 0.6247 | 0.9791 |
| linolenoyl glycerol 2&1 | 2-LnG | Abstract reasoning | 233 | -1.8585 | 1.0094 | 0.0669 | 0.4513 | 229 | -1.2819 | 0.9416 | 0.1748 | 0.8988 |
| oleoyl glycerol 2&1 | 2-OG | Abstract reasoning | 230 | -0.2528 | 0.2107 | 0.2314 | 0.8368 | 226 | -0.1108 | 0.1959 | 0.5724 | 0.9791 |
| palmitoyl glycerol 2&1 | 2-PG | Abstract reasoning | 235 | 0.0073 | 0.0280 | 0.7954 | 0.9459 | 230 | 0.0028 | 0.0261 | 0.9145 | 0.9887 |

SUPPLEMENTARY DATA

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| stearoyl glycerol 2&1 | 2-SG | Abstract reasoning | 233 | 0.0057 | 0.0077 | 0.4559 | 0.8368 | 228 | 0.0066 | 0.0071 | 0.3525 | 0.8988 |
| linoleoyl alanine | L-Ala | Abstract reasoning | 234 | -17.3043 | 15.6476 | 0.2699 | 0.8368 | 229 | -0.3492 | 15.2867 | 0.9818 | 0.9887 |
| oleoyl alanine | O-Ala | Abstract reasoning | 234 | -5.7386 | 2.8476 | 0.0450 | 0.4513 | 229 | -3.8351 | 2.7391 | 0.1629 | 0.8988 |
| palmitoyl alanine | P-Ala | Abstract reasoning | 234 | -20.7130 | 6.9283 | 0.0031 | 0.1276 | 229 | -13.6675 | 6.7887 | 0.0453 | 0.8988 |
| linolenoyl amide | Ln-Am | Abstract reasoning | 232 | -0.3609 | 0.4259 | 0.3977 | 0.8368 | 227 | -0.2429 | 0.3957 | 0.5400 | 0.9791 |
| linoleoyl amide | L-Am | Abstract reasoning | 233 | 0.0149 | 0.0433 | 0.7307 | 0.9459 | 228 | 0.0174 | 0.0399 | 0.6621 | 0.9791 |
| palmitoyl amide | P-Am | Abstract reasoning | 233 | -0.0285 | 0.0277 | 0.3044 | 0.8368 | 228 | -0.0119 | 0.0259 | 0.6460 | 0.9791 |
| linoleoyl glycine | L-Gly | Abstract reasoning | 234 | 0.7316 | 2.7826 | 0.7928 | 0.9459 | 229 | 1.6569 | 2.6644 | 0.5347 | 0.9791 |
| oleoyl glycine | O-Gly | Abstract reasoning | 235 | -0.7283 | 1.2704 | 0.5670 | 0.8603 | 230 | -0.2462 | 1.2579 | 0.8450 | 0.9887 |
| palmitoyl glycine | P-Gly | Abstract reasoning | 235 | -0.3429 | 0.6896 | 0.6195 | 0.8793 | 230 | -0.0421 | 0.6733 | 0.9502 | 0.9887 |
| linoleoyl leucine | L-Leu | Abstract reasoning | 233 | 3.4023 | 4.3243 | 0.4322 | 0.8368 | 228 | 3.8589 | 4.3506 | 0.3761 | 0.8988 |
| oleoyl leucine | O-Leu | Abstract reasoning | 233 | 1.8456 | 1.4334 | 0.1992 | 0.8368 | 228 | 1.6105 | 1.4200 | 0.2580 | 0.8988 |
| palmitoyl leucine | P-Leu | Abstract reasoning | 234 | 7.4086 | 9.4694 | 0.4348 | 0.8368 | 229 | 9.0630 | 9.6376 | 0.3481 | 0.8988 |
| linoleoyl serine | L-Ser | Abstract reasoning | 235 | 5.5053 | 7.4693 | 0.4618 | 0.8368 | 230 | 6.0684 | 7.0171 | 0.3881 | 0.8988 |
| oleoyl serine | O-Ser | Abstract reasoning | 234 | 0.3297 | 2.7790 | 0.9057 | 0.9584 | 229 | 0.3421 | 2.6825 | 0.8986 | 0.9887 |
| palmitoyl serine | P-Ser | Abstract reasoning | 235 | -3.8559 | 1.8627 | 0.0396 | 0.4513 | 230 | -3.3793 | 1.8258 | 0.0655 | 0.8988 |
| arachidonoyl serine | A-Ser | Abstract reasoning | 235 | -1.0689 | 0.5482 | 0.0524 | 0.4513 | 230 | -0.5550 | 0.5159 | 0.2832 | 0.8988 |
| linoleoyl phenylalanine | L-Phe | Abstract reasoning | 235 | 0.5017 | 0.5214 | 0.3369 | 0.8368 | 230 | 0.6223 | 0.4921 | 0.2074 | 0.8988 |
| arachidonoyl leucine | A-Leu | Abstract reasoning | 235 | 0.4307 | 0.5184 | 0.4070 | 0.8368 | 230 | 0.4853 | 0.5050 | 0.3376 | 0.8988 |
| docosahexaenoyl leucine | DH-Leu | Abstract reasoning | 235 | 0.2299 | 0.5846 | 0.6945 | 0.9459 | 230 | 0.1836 | 0.5458 | 0.7369 | 0.9825 |
| arachidonoyl glycine | A-Gly | Abstract reasoning | 235 | -0.1391 | 0.4981 | 0.7803 | 0.9459 | 230 | 0.2551 | 0.4757 | 0.5923 | 0.9791 |
| docosahexaenoyl glycine | DH-Gly | Abstract reasoning | 235 | 1.0079 | 0.5573 | 0.0718 | 0.4513 | 230 | 0.7674 | 0.5204 | 0.1418 | 0.8988 |
| stearidonoyl glycine | S-Gly | Abstract reasoning | 235 | 1.3998 | 0.5024 | 0.0058 | 0.1276 | 230 | 0.9801 | 0.4776 | 0.0413 | 0.8988 |

SUPPLEMENTARY DATA

| | | | | | | | | | | | | |
|------------------------------|-------|-------------------------|-----|---------|--------|--------|--------|-----|---------|--------|--------|--------|
| linoleoyl valine | L-Val | Abstract reasoning | 235 | 0.2700 | 0.5002 | 0.5898 | 0.8650 | 230 | 0.4307 | 0.4830 | 0.3734 | 0.8988 |
| oleoyl valine | O-Val | Abstract reasoning | 235 | 0.6668 | 0.5457 | 0.2230 | 0.8368 | 230 | 0.5103 | 0.5140 | 0.3219 | 0.8988 |
| arachidonoyl glycerol 2&1 | 2-AG | Abstract reasoning | 235 | -0.3759 | 0.5016 | 0.4543 | 0.8368 | 230 | 0.1761 | 0.4760 | 0.7118 | 0.9791 |
| arachidonic acid | AA | Perceptual organization | 220 | 0.0002 | 0.0004 | 0.6450 | 0.9675 | 216 | 0.0002 | 0.0004 | 0.5537 | 0.9875 |
| docosahexaenoic acid | DHA | Perceptual organization | 219 | 0.0001 | 0.0005 | 0.8443 | 0.9675 | 215 | -0.0001 | 0.0004 | 0.8237 | 0.9875 |
| eicosapentaenoic acid | EPA | Perceptual organization | 217 | 0.0004 | 0.0010 | 0.6828 | 0.9675 | 213 | 0.0001 | 0.0009 | 0.8805 | 0.9875 |
| linoleic acid | LA | Perceptual organization | 220 | -0.0001 | 0.0001 | 0.5047 | 0.9675 | 216 | -0.0001 | 0.0001 | 0.5818 | 0.9875 |
| linolenic acid | LnA | Perceptual organization | 220 | -0.0002 | 0.0002 | 0.3997 | 0.9675 | 216 | -0.0002 | 0.0002 | 0.2921 | 0.9875 |
| oleic acid | OA | Perceptual organization | 220 | -0.0001 | 0.0001 | 0.4178 | 0.9675 | 216 | 0.0000 | 0.0001 | 0.5571 | 0.9875 |
| palmitic acid | PA | Perceptual organization | 220 | -0.0002 | 0.0001 | 0.1802 | 0.9675 | 216 | -0.0001 | 0.0001 | 0.5256 | 0.9875 |
| stearic acid | SA | Perceptual organization | 220 | -0.0002 | 0.0001 | 0.1388 | 0.9675 | 216 | -0.0001 | 0.0001 | 0.5932 | 0.9875 |
| arachidonoyl ethanolamide | AEA | Perceptual organization | 219 | 0.5687 | 0.5556 | 0.3071 | 0.9675 | 215 | 0.8704 | 0.5531 | 0.1171 | 0.9875 |
| docosahexaenoyl ethanolamide | DHEA | Perceptual organization | 220 | 0.0918 | 0.3560 | 0.7967 | 0.9675 | 216 | 0.1024 | 0.3624 | 0.7778 | 0.9875 |
| linoleoyl ethanolamide | LEA | Perceptual organization | 219 | -0.1957 | 0.3359 | 0.5608 | 0.9675 | 215 | 0.0054 | 0.3455 | 0.9875 | 0.9875 |
| oleoyl ethanolamide | OEA | Perceptual organization | 219 | -0.0307 | 0.2019 | 0.8795 | 0.9675 | 215 | 0.0237 | 0.2081 | 0.9096 | 0.9875 |
| palmitoyl ethanolamide | PEA | Perceptual organization | 220 | -0.1482 | 0.1397 | 0.2901 | 0.9675 | 216 | -0.0260 | 0.1438 | 0.8569 | 0.9875 |
| stearoyl ethanolamide | SEA | Perceptual organization | 220 | -0.0574 | 0.2281 | 0.8015 | 0.9675 | 216 | 0.1128 | 0.2290 | 0.6229 | 0.9875 |
| docosahexaenoyl glycerol 2&1 | 2-DHG | Perceptual organization | 218 | 0.0890 | 0.1081 | 0.4114 | 0.9675 | 214 | 0.0195 | 0.1078 | 0.8567 | 0.9875 |
| linolenoyl glycerol 2&1 | 2-LnG | Perceptual organization | 218 | -0.1432 | 0.1309 | 0.2750 | 0.9675 | 215 | -0.1527 | 0.1287 | 0.2368 | 0.9875 |
| oleoyl glycerol 2&1 | 2-OG | Perceptual organization | 215 | 0.0179 | 0.0274 | 0.5142 | 0.9675 | 212 | 0.0299 | 0.0269 | 0.2666 | 0.9875 |
| palmitoyl glycerol 2&1 | 2-PG | Perceptual organization | 220 | -0.0035 | 0.0036 | 0.3285 | 0.9675 | 216 | -0.0033 | 0.0035 | 0.3542 | 0.9875 |
| stearoyl glycerol 2&1 | 2-SG | Perceptual organization | 218 | -0.0002 | 0.0010 | 0.8645 | 0.9675 | 214 | 0.0001 | 0.0010 | 0.9488 | 0.9875 |
| linoleoyl alanine | L-Ala | Perceptual organization | 219 | -2.0209 | 2.0489 | 0.3251 | 0.9675 | 215 | -0.7674 | 2.1203 | 0.7178 | 0.9875 |

SUPPLEMENTARY DATA

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|-------------------------|--------|-------------------------|-----|---------|--------|--------|--------|-----|---------|--------|--------|--------|
| oleoyl alanine | O-Ala | Perceptual organization | 219 | -0.5607 | 0.3732 | 0.1345 | 0.9675 | 215 | -0.5155 | 0.3798 | 0.1762 | 0.9875 |
| palmitoyl alanine | P-Ala | Perceptual organization | 219 | -1.6922 | 0.9011 | 0.0617 | 0.9049 | 215 | -1.1976 | 0.9269 | 0.1978 | 0.9875 |
| linolenoyl amide | Ln-Am | Perceptual organization | 217 | 0.0004 | 0.0620 | 0.9949 | 0.9949 | 213 | 0.0052 | 0.0609 | 0.9321 | 0.9875 |
| linoleoyl amide | L-Am | Perceptual organization | 218 | 0.0036 | 0.0057 | 0.5208 | 0.9675 | 214 | 0.0035 | 0.0055 | 0.5194 | 0.9875 |
| palmitoyl amide | P-Am | Perceptual organization | 218 | -0.0039 | 0.0036 | 0.2775 | 0.9675 | 214 | -0.0028 | 0.0035 | 0.4290 | 0.9875 |
| linoleoyl glycine | L-Gly | Perceptual organization | 219 | 0.0260 | 0.3636 | 0.9430 | 0.9949 | 215 | 0.1653 | 0.3636 | 0.6499 | 0.9875 |
| oleoyl glycine | O-Gly | Perceptual organization | 220 | -0.0575 | 0.1664 | 0.7301 | 0.9675 | 216 | 0.0366 | 0.1716 | 0.8312 | 0.9875 |
| palmitoyl glycine | P-Gly | Perceptual organization | 220 | 0.0180 | 0.0888 | 0.8397 | 0.9675 | 216 | 0.0798 | 0.0902 | 0.3773 | 0.9875 |
| linoleoyl leucine | L-Leu | Perceptual organization | 218 | -0.2580 | 0.5617 | 0.6464 | 0.9675 | 214 | -0.2092 | 0.5978 | 0.7268 | 0.9875 |
| oleoyl leucine | O-Leu | Perceptual organization | 218 | -0.1148 | 0.1854 | 0.5366 | 0.9675 | 214 | -0.0884 | 0.1937 | 0.6487 | 0.9875 |
| palmitoyl leucine | P-Leu | Perceptual organization | 219 | -0.9035 | 1.2194 | 0.4595 | 0.9675 | 215 | -0.4776 | 1.3081 | 0.7154 | 0.9875 |
| linoleoyl serine | L-Ser | Perceptual organization | 220 | 0.2836 | 0.9735 | 0.7711 | 0.9675 | 216 | 0.4939 | 0.9649 | 0.6093 | 0.9875 |
| oleoyl serine | O-Ser | Perceptual organization | 219 | -0.1583 | 0.3747 | 0.6732 | 0.9675 | 215 | -0.1079 | 0.3779 | 0.7755 | 0.9875 |
| palmitoyl serine | P-Ser | Perceptual organization | 220 | -0.4817 | 0.2454 | 0.0509 | 0.9049 | 216 | -0.3445 | 0.2544 | 0.1772 | 0.9875 |
| arachidonoyl serine | A-Ser | Perceptual organization | 220 | -0.0021 | 0.0714 | 0.9768 | 0.9949 | 216 | 0.0398 | 0.0703 | 0.5722 | 0.9875 |
| linoleoyl phenylalanine | L-Phe | Perceptual organization | 220 | 0.0470 | 0.0686 | 0.4945 | 0.9675 | 216 | 0.0416 | 0.0688 | 0.5461 | 0.9875 |
| arachidonoyl leucine | A-Leu | Perceptual organization | 220 | 0.0885 | 0.0682 | 0.1960 | 0.9675 | 216 | 0.0999 | 0.0701 | 0.1554 | 0.9875 |
| docosahexaenoyl leucine | DH-Leu | Perceptual organization | 220 | 0.0373 | 0.0772 | 0.6291 | 0.9675 | 216 | 0.0258 | 0.0762 | 0.7357 | 0.9875 |
| arachidonoyl glycine | A-Gly | Perceptual organization | 220 | -0.0740 | 0.0650 | 0.2564 | 0.9675 | 216 | -0.0243 | 0.0651 | 0.7098 | 0.9875 |
| docosahexaenoyl glycine | DH-Gly | Perceptual organization | 220 | -0.0327 | 0.0733 | 0.6560 | 0.9675 | 216 | -0.0197 | 0.0719 | 0.7844 | 0.9875 |
| stearidonoyl glycine | S-Gly | Perceptual organization | 220 | 0.1300 | 0.0660 | 0.0502 | 0.9049 | 216 | 0.1330 | 0.0658 | 0.0445 | 0.9875 |
| linoleoyl valine | L-Val | Perceptual organization | 220 | -0.0337 | 0.0651 | 0.6051 | 0.9675 | 216 | -0.0128 | 0.0665 | 0.8478 | 0.9875 |
| oleoyl valine | O-Val | Perceptual organization | 220 | 0.0008 | 0.0718 | 0.9911 | 0.9949 | 216 | 0.0023 | 0.0714 | 0.9745 | 0.9875 |

SUPPLEMENTARY DATA

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|------------------------------|--------|-------------------------|-----|---------|--------|--------|--------|-----|---------|--------|--------|--------|
| arachidonoyl glycerol 2&1 | 2-AG | Perceptual organization | 220 | -0.0199 | 0.0660 | 0.7635 | 0.9675 | 216 | 0.0026 | 0.0661 | 0.9691 | 0.9875 |
| arachidonic acid | AA | Attention | 230 | 0.0004 | 0.0003 | 0.1939 | 0.7110 | 226 | 0.0005 | 0.0003 | 0.0701 | 0.7319 |
| docosahexaenoic acid | DHA | Attention | 229 | 0.0000 | 0.0003 | 0.9521 | 0.9742 | 225 | 0.0000 | 0.0003 | 0.8873 | 0.9433 |
| eicosapentaenoic acid | EPA | Attention | 227 | 0.0002 | 0.0006 | 0.7973 | 0.9028 | 223 | 0.0004 | 0.0006 | 0.5644 | 0.9433 |
| linoleic acid | LA | Attention | 230 | 0.0000 | 0.0001 | 0.6135 | 0.9028 | 226 | 0.0000 | 0.0001 | 0.9637 | 0.9637 |
| linolenic acid | LnA | Attention | 230 | 0.0000 | 0.0001 | 0.7532 | 0.9028 | 226 | 0.0000 | 0.0002 | 0.8618 | 0.9433 |
| oleic acid | OA | Attention | 230 | 0.0000 | 0.0001 | 0.4231 | 0.9028 | 226 | 0.0000 | 0.0001 | 0.7079 | 0.9433 |
| palmitic acid | PA | Attention | 230 | -0.0001 | 0.0001 | 0.3363 | 0.9028 | 226 | 0.0000 | 0.0001 | 0.7580 | 0.9433 |
| stearic acid | SA | Attention | 230 | 0.0000 | 0.0001 | 0.8162 | 0.9028 | 226 | 0.0001 | 0.0001 | 0.2263 | 0.9433 |
| arachidonoyl ethanolamide | AEA | Attention | 229 | -0.2032 | 0.3950 | 0.6075 | 0.9028 | 225 | 0.0661 | 0.3985 | 0.8684 | 0.9433 |
| docosahexaenoyl ethanolamide | DHEA | Attention | 230 | -0.4738 | 0.2351 | 0.0450 | 0.4950 | 226 | -0.4039 | 0.2444 | 0.0998 | 0.7319 |
| linoleoyl ethanolamide | LEA | Attention | 229 | -0.3394 | 0.2254 | 0.1335 | 0.7092 | 225 | -0.1629 | 0.2338 | 0.4866 | 0.9433 |
| oleoyl ethanolamide | OEA | Attention | 228 | -0.1851 | 0.1368 | 0.1773 | 0.7092 | 224 | -0.1424 | 0.1443 | 0.3247 | 0.9433 |
| palmitoyl ethanolamide | PEA | Attention | 229 | -0.1304 | 0.0963 | 0.1770 | 0.7092 | 225 | -0.0634 | 0.1004 | 0.5283 | 0.9433 |
| stearoyl ethanolamide | SEA | Attention | 229 | -0.2368 | 0.1506 | 0.1173 | 0.7092 | 225 | -0.1442 | 0.1534 | 0.3484 | 0.9433 |
| docosahexaenoyl glycerol 2&1 | 2-DHG | Attention | 227 | 0.1063 | 0.0737 | 0.1506 | 0.7092 | 223 | 0.0840 | 0.0747 | 0.2625 | 0.9433 |
| linolenoyl glycerol 2&1 | 2-LnG | Attention | 228 | 0.1470 | 0.0895 | 0.1019 | 0.7092 | 225 | 0.1570 | 0.0884 | 0.0772 | 0.7319 |
| oleoyl glycerol 2&1 | 2-OG | Attention | 225 | 0.0067 | 0.0186 | 0.7194 | 0.9028 | 222 | 0.0132 | 0.0183 | 0.4725 | 0.9433 |
| palmitoyl glycerol 2&1 | 2-PG | Attention | 230 | 0.0006 | 0.0025 | 0.8081 | 0.9028 | 226 | 0.0015 | 0.0024 | 0.5518 | 0.9433 |
| stearoyl glycerol 2&1 | 2-SG | Attention | 228 | -0.0002 | 0.0007 | 0.8141 | 0.9028 | 224 | 0.0001 | 0.0007 | 0.8577 | 0.9433 |
| linoleoyl alanine | L-Ala | Attention | 230 | -0.7372 | 1.3749 | 0.5924 | 0.9028 | 226 | 0.5987 | 1.4337 | 0.6767 | 0.9433 |
| oleoyl alanine | O-Ala | Attention | 230 | -0.0578 | 0.2520 | 0.8188 | 0.9028 | 226 | 0.0686 | 0.2579 | 0.7905 | 0.9433 |
| palmitoyl alanine | P-Ala | Attention | 230 | -0.0902 | 0.6185 | 0.8841 | 0.9467 | 226 | 0.3241 | 0.6407 | 0.6135 | 0.9433 |
| linolenoyl amide | Ln-Am | Attention | 227 | -0.1399 | 0.0365 | 0.0002 | 0.0044 | 223 | -0.1236 | 0.0363 | 0.0008 | 0.0176 |
| linoleoyl amide | L-Am | Attention | 228 | -0.0140 | 0.0038 | 0.0002 | 0.0044 | 224 | -0.0132 | 0.0037 | 0.0005 | 0.0176 |
| palmitoyl amide | P-Am | Attention | 228 | -0.0054 | 0.0025 | 0.0298 | 0.4371 | 224 | -0.0041 | 0.0025 | 0.0993 | 0.7319 |
| linoleoyl glycine | L-Gly | Attention | 229 | -0.2944 | 0.2452 | 0.2311 | 0.7822 | 225 | -0.1157 | 0.2507 | 0.6449 | 0.9433 |
| oleoyl glycine | O-Gly | Attention | 230 | -0.1182 | 0.1120 | 0.2925 | 0.9028 | 226 | -0.0149 | 0.1186 | 0.9004 | 0.9433 |
| palmitoyl glycine | P-Gly | Attention | 230 | -0.0317 | 0.0604 | 0.5999 | 0.9028 | 226 | 0.0302 | 0.0627 | 0.6311 | 0.9433 |
| linoleoyl leucine | L-Leu | Attention | 228 | 0.3438 | 0.3852 | 0.3731 | 0.9028 | 224 | 0.4257 | 0.4100 | 0.3003 | 0.9433 |
| oleoyl leucine | O-Leu | Attention | 228 | 0.0434 | 0.1307 | 0.7403 | 0.9028 | 224 | 0.0296 | 0.1372 | 0.8291 | 0.9433 |
| palmitoyl leucine | P-Leu | Attention | 229 | 0.5227 | 0.8434 | 0.5360 | 0.9028 | 225 | 0.5831 | 0.9149 | 0.5246 | 0.9433 |
| linoleoyl serine | L-Ser | Attention | 230 | -0.2702 | 0.6649 | 0.6849 | 0.9028 | 226 | 0.0606 | 0.6701 | 0.9280 | 0.9496 |
| oleoyl serine | O-Ser | Attention | 229 | -0.2050 | 0.2483 | 0.4100 | 0.9028 | 225 | -0.1065 | 0.2553 | 0.6770 | 0.9433 |
| palmitoyl serine | P-Ser | Attention | 230 | -0.2682 | 0.1653 | 0.1061 | 0.7092 | 226 | -0.1725 | 0.1736 | 0.3215 | 0.9433 |
| arachidonoyl serine | A-Ser | Attention | 230 | -0.0446 | 0.0490 | 0.3635 | 0.9028 | 226 | -0.0247 | 0.0489 | 0.6140 | 0.9433 |
| linoleoyl phenylalanine | L-Phe | Attention | 230 | -0.0314 | 0.0464 | 0.4991 | 0.9028 | 226 | -0.0315 | 0.0465 | 0.4988 | 0.9433 |
| arachidonoyl leucine | A-Leu | Attention | 230 | 0.0105 | 0.0461 | 0.8207 | 0.9028 | 226 | 0.0230 | 0.0476 | 0.6294 | 0.9433 |
| docosahexaenoyl leucine | DH-Leu | Attention | 230 | 0.0127 | 0.0520 | 0.8068 | 0.9028 | 226 | 0.0111 | 0.0517 | 0.8300 | 0.9433 |
| arachidonoyl glycine | A-Gly | Attention | 230 | 0.0004 | 0.0441 | 0.9920 | 0.9920 | 226 | 0.0438 | 0.0448 | 0.3297 | 0.9433 |
| docosahexaenoyl glycine | DH-Gly | Attention | 230 | 0.0217 | 0.0495 | 0.6612 | 0.9028 | 226 | 0.0381 | 0.0492 | 0.4403 | 0.9433 |
| stearidonoyl glycine | S-Gly | Attention | 230 | -0.0182 | 0.0451 | 0.6869 | 0.9028 | 226 | -0.0124 | 0.0451 | 0.7837 | 0.9433 |

SUPPLEMENTARY DATA

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|------------------------------|-------|--------------------|-----|---------|--------|--------|--------|-----|---------|--------|--------|--------|
| linoleoyl valine | L-Val | Attention | 230 | 0.0108 | 0.0443 | 0.8067 | 0.9028 | 226 | 0.0244 | 0.0454 | 0.5912 | 0.9433 |
| oleoyl valine | O-Val | Attention | 230 | 0.0403 | 0.0483 | 0.4043 | 0.9028 | 226 | 0.0528 | 0.0481 | 0.2733 | 0.9433 |
| arachidonoyl glycerol 2&1 | 2-AG | Attention | 230 | 0.0054 | 0.0444 | 0.9037 | 0.9467 | 226 | 0.0261 | 0.0446 | 0.5585 | 0.9433 |
| arachidonic acid | AA | Executive function | 224 | -0.0008 | 0.0003 | 0.0054 | 0.0264 | 220 | -0.0007 | 0.0003 | 0.0150 | 0.0943 |
| docosahexaenoic acid | DHA | Executive function | 223 | -0.0004 | 0.0003 | 0.1938 | 0.3553 | 219 | -0.0003 | 0.0003 | 0.3240 | 0.7128 |
| eicosapentaenoic acid | EPA | Executive function | 221 | -0.0003 | 0.0006 | 0.6424 | 0.7438 | 217 | 0.0000 | 0.0006 | 0.9605 | 0.9902 |
| linoleic acid | LA | Executive function | 224 | -0.0003 | 0.0001 | <.0001 | 0.0022 | 220 | -0.0002 | 0.0001 | 0.0023 | 0.0363 |
| linolenic acid | LnA | Executive function | 224 | -0.0006 | 0.0001 | <.0001 | 0.0022 | 220 | -0.0005 | 0.0001 | 0.0005 | 0.0220 |
| oleic acid | OA | Executive function | 224 | -0.0002 | 0.0000 | 0.0002 | 0.0029 | 220 | -0.0002 | 0.0001 | 0.0033 | 0.0363 |
| palmitic acid | PA | Executive function | 224 | -0.0003 | 0.0001 | 0.0005 | 0.0053 | 220 | -0.0003 | 0.0001 | 0.0078 | 0.0572 |
| stearic acid | SA | Executive function | 224 | -0.0001 | 0.0001 | 0.3898 | 0.5814 | 220 | 0.0000 | 0.0001 | 0.9133 | 0.9902 |
| arachidonoyl ethanolamide | AEA | Executive function | 223 | -0.5789 | 0.3889 | 0.1380 | 0.2760 | 219 | -0.2688 | 0.3922 | 0.4940 | 0.8502 |
| docosahexaenoyl ethanolamide | DHEA | Executive function | 224 | -0.0898 | 0.2340 | 0.7016 | 0.7915 | 220 | 0.0795 | 0.2416 | 0.7423 | 0.9606 |
| linoleoyl ethanolamide | LEA | Executive function | 223 | -0.3826 | 0.2243 | 0.0894 | 0.2185 | 219 | -0.0973 | 0.2327 | 0.6762 | 0.9606 |
| oleoyl ethanolamide | OEA | Executive function | 222 | -0.1964 | 0.1312 | 0.1359 | 0.2760 | 218 | -0.0758 | 0.1383 | 0.5844 | 0.8931 |
| palmitoyl ethanolamide | PEA | Executive function | 223 | -0.2029 | 0.0942 | 0.0324 | 0.1103 | 219 | -0.0912 | 0.0979 | 0.3526 | 0.7388 |
| stearoyl ethanolamide | SEA | Executive function | 223 | -0.1621 | 0.1491 | 0.2780 | 0.4893 | 219 | 0.0012 | 0.1505 | 0.9937 | 0.9937 |
| docosahexaenoyl glycerol 2&1 | 2-DHG | Executive function | 221 | 0.0382 | 0.0737 | 0.6051 | 0.7321 | 217 | 0.0181 | 0.0741 | 0.8074 | 0.9806 |
| linolenoyl glycerol 2&1 | 2-LnG | Executive function | 222 | -0.0504 | 0.0888 | 0.5708 | 0.7193 | 219 | -0.0333 | 0.0870 | 0.7026 | 0.9606 |
| oleoyl glycerol 2&1 | 2-OG | Executive function | 219 | -0.0169 | 0.0186 | 0.3627 | 0.5814 | 216 | -0.0106 | 0.0182 | 0.5605 | 0.8931 |
| palmitoyl glycerol 2&1 | 2-PG | Executive function | 224 | 0.0001 | 0.0024 | 0.9629 | 0.9629 | 220 | 0.0001 | 0.0024 | 0.9596 | 0.9902 |
| stearoyl glycerol 2&1 | 2-SG | Executive function | 222 | -0.0002 | 0.0007 | 0.8007 | 0.8442 | 218 | 0.0000 | 0.0007 | 0.9516 | 0.9902 |
| linoleoyl alanine | L-Ala | Executive function | 224 | -3.3434 | 1.3473 | 0.0138 | 0.0552 | 220 | -2.3511 | 1.4004 | 0.0947 | 0.3578 |
| oleoyl alanine | O-Ala | Executive function | 224 | -0.8312 | 0.2443 | 0.0008 | 0.0059 | 220 | -0.7440 | 0.2495 | 0.0032 | 0.0363 |

SUPPLEMENTARY DATA

| | | | | | | | | | | | | |
|---------------------------|--------|--------------------|-----|---------|--------|--------|--------|-----|---------|--------|--------|--------|
| palmitoyl alanine | P-Ala | Executive function | 224 | -2.0827 | 0.6009 | 0.0006 | 0.0053 | 220 | -1.7517 | 0.6201 | 0.0052 | 0.0458 |
| linolenoyl amide | Ln-Am | Executive function | 221 | -0.0803 | 0.0373 | 0.0326 | 0.1103 | 217 | -0.0674 | 0.0368 | 0.0686 | 0.3559 |
| linoleoyl amide | L-Am | Executive function | 222 | -0.0026 | 0.0040 | 0.5259 | 0.7012 | 218 | -0.0014 | 0.0039 | 0.7252 | 0.9606 |
| palmitoyl amide | P-Am | Executive function | 222 | -0.0049 | 0.0025 | 0.0465 | 0.1364 | 218 | -0.0034 | 0.0024 | 0.1580 | 0.4584 |
| linoleoyl glycine | L-Gly | Executive function | 223 | -0.4952 | 0.2388 | 0.0393 | 0.1235 | 219 | -0.2783 | 0.2440 | 0.2553 | 0.5912 |
| oleoyl glycine | O-Gly | Executive function | 224 | -0.3187 | 0.1083 | 0.0036 | 0.0226 | 220 | -0.1876 | 0.1150 | 0.1042 | 0.3578 |
| palmitoyl glycine | P-Gly | Executive function | 224 | -0.1679 | 0.0589 | 0.0048 | 0.0264 | 220 | -0.1066 | 0.0613 | 0.0833 | 0.3578 |
| linoleoyl leucine | L-Leu | Executive function | 222 | 0.0951 | 0.3862 | 0.8058 | 0.8442 | 218 | -0.0198 | 0.4119 | 0.9617 | 0.9902 |
| oleoyl leucine | O-Leu | Executive function | 222 | 0.0321 | 0.1288 | 0.8034 | 0.8442 | 218 | -0.0473 | 0.1347 | 0.7257 | 0.9606 |
| palmitoyl leucine | P-Leu | Executive function | 223 | 0.7284 | 0.8316 | 0.3820 | 0.5814 | 219 | 0.2219 | 0.8966 | 0.8047 | 0.9806 |
| linoleoyl serine | L-Ser | Executive function | 224 | -1.0299 | 0.6532 | 0.1163 | 0.2693 | 220 | -0.7522 | 0.6541 | 0.2515 | 0.5912 |
| oleoyl serine | O-Ser | Executive function | 223 | -0.6315 | 0.2465 | 0.0111 | 0.0488 | 219 | -0.4565 | 0.2532 | 0.0728 | 0.3559 |
| palmitoyl serine | P-Ser | Executive function | 224 | -0.2861 | 0.1666 | 0.0873 | 0.2185 | 220 | -0.2806 | 0.1727 | 0.1057 | 0.3578 |
| arachidonoyl serine | A-Ser | Executive function | 224 | 0.0409 | 0.0482 | 0.3964 | 0.5814 | 220 | 0.0661 | 0.0476 | 0.1667 | 0.4584 |
| linoleoyl phenylalanine | L-Phe | Executive function | 224 | 0.0406 | 0.0462 | 0.3800 | 0.5814 | 220 | 0.0311 | 0.0461 | 0.5010 | 0.8502 |
| arachidonoyl leucine | A-Leu | Executive function | 224 | -0.0040 | 0.0456 | 0.9307 | 0.9523 | 220 | -0.0104 | 0.0469 | 0.8246 | 0.9806 |
| docosahexaenoyl leucine | DH-Leu | Executive function | 224 | 0.0801 | 0.0520 | 0.1246 | 0.2741 | 220 | 0.0774 | 0.0512 | 0.1324 | 0.4161 |
| arachidonoyl glycine | A-Gly | Executive function | 224 | -0.0779 | 0.0433 | 0.0734 | 0.2019 | 220 | -0.0386 | 0.0440 | 0.3814 | 0.7499 |
| docosahexaenoyl glycine | DH-Gly | Executive function | 224 | 0.0280 | 0.0495 | 0.5722 | 0.7193 | 220 | 0.0420 | 0.0490 | 0.3920 | 0.7499 |
| stearidonoyl glycine | S-Gly | Executive function | 224 | -0.0324 | 0.0450 | 0.4732 | 0.6507 | 220 | -0.0300 | 0.0447 | 0.5024 | 0.8502 |
| linoleoyl valine | L-Val | Executive function | 224 | 0.0621 | 0.0439 | 0.1589 | 0.3040 | 220 | 0.0594 | 0.0448 | 0.1863 | 0.4822 |
| oleoyl valine | O-Val | Executive function | 224 | -0.0344 | 0.0475 | 0.4700 | 0.6507 | 220 | -0.0256 | 0.0472 | 0.5886 | 0.8931 |
| arachidonoyl glycerol 2&1 | 2-AG | Executive function | 224 | -0.0222 | 0.0441 | 0.6156 | 0.7321 | 220 | 0.0018 | 0.0441 | 0.9677 | 0.9902 |

SUPPLEMENTARY DATA

Cognitive function: Verbal memory = Logical Memory-Delayed Recall test; Visual memory = Visual Reproductions-Delayed Recall test; Abstract reasoning = Similarities test; Perceptual organization = Hooper Visual Organization Test; Attention = Trail-making Test A; Executive function = Trail-making Test B minus A. Models adjusted for age, age squared, sex, education, apolipoprotein ε4 genotype, obesity and time between blood draw and cognitive assessment.

Supplementary Table 4. Main sample characteristics by sex and apolipoprotein ε4 genotype.

| Variables | Women N=142 (60%) | Men N=95 (40%) | No Apolipoprotein ε4 genotype N=186 (80%) | Apolipoprotein ε4 genotype N=46 (20%) |
|---|-------------------------|----------------------|---|--|
| Age, y | 73.6±6.6 | 72.8±5.5 | 73.7±6.2 | 72.4±5.9 |
| Sex (men) | - | - | 74 (39.8) | 20 (43.5) |
| Education (college) | 93 (65.5) | 72 (75.8) | 129 (69.3) | 31 (67.4) |
| Apolipoprotein ε4 genotype | 26 (18.8) | 20 (21.3) | - | - |
| Obesity | 40 (28.2) | 24 (25.3) | 54 (29.0) | 10 (21.7) |
| Time between blood draw and cognitive assessment, y | 1.6 ±1.0 | 1.7 ±1.0 | 1.6 ±1.0 | 1.8 ±1.0 |
| Cognitive function | | | | |
| Verbal memory | 11.7 ±4.0 | 10.7 ±3.7 | 11.3 ±3.9 | 10.1 ±3.8 |
| Visual memory | 6.4 ±3.0 | 6.7 ±3.0 | 6.6 ±2.9 | 6.2 ±3.2 |
| Abstract reasoning | 16.3 ±4.1 | 16.6 ±3.3 | 16.3 ±3.9 | 16.6 ±3.2 |
| Perceptual organization | 25.5 [23.5-27.0] | 24.5 [22.5-26.5] | 25.0 [23.0-27.0] | 24.8 [23.3-27.5] |
| Attention | 0.6 [0.5-0.7] | 0.6 [0.5-0.7] | 0.6 [0.5-0.7] | 0.6 [0.5-0.7] |
| Executive function | 0.9 [0.6-1.5] | 0.9 [0.6-1.4] | 0.9 [0.6-1.4] | 1.0 [0.7-1.7] |

Cognitive function: Verbal memory = Logical Memory-Delayed Recall test; Visual memory = Visual Reproductions-Delayed Recall test; Abstract reasoning = Similarities test; Perceptual organization = Hooper Visual Organization Test; Attention = Trail-making Test A; Executive function = Trail-making Test B minus A. Continuous traits values are reported as mean ±SD or median [IQR] and dichotomous traits values are reported as number (percent).

Supplementary Table 5. Interactions between levels of each of the 44 eCBs compounds and sex / apolipoprotein ε4 genotype, in relation to cognitive function in the total sample.

| Endocannabinoids | Abbreviation | Outcomes | Interaction with sex | | | | Interaction with apolipoprotein ε4 genotype | | | |
|-----------------------|--------------|---------------|----------------------|--------------------|----------------|---------|---|--------------------|----------------|---------|
| | | | N | Parameter Estimate | Standard Error | P value | N | Parameter Estimate | Standard Error | P value |
| arachidonic acid | AA | Verbal memory | 226 | 0.0135 | 0.0071 | 0.0580 | 226 | -0.0013 | 0.0091 | 0.8885 |
| docosahexaenoic acid | DHA | Verbal memory | 226 | 0.0065 | 0.0075 | 0.3874 | 226 | 0.0003 | 0.0091 | 0.9700 |
| eicosapentaenoic acid | EPA | Verbal memory | 224 | 0.0228 | 0.0160 | 0.1555 | 224 | 0.0035 | 0.0199 | 0.8619 |
| linoleic acid | LA | Verbal memory | 226 | 0.0035 | 0.0020 | 0.0767 | 226 | -0.0011 | 0.0026 | 0.6772 |
| linolenic acid | LnA | Verbal memory | 226 | 0.0075 | 0.0039 | 0.0593 | 226 | -0.0022 | 0.0055 | 0.6920 |
| oleic acid | OA | Verbal memory | 226 | 0.0021 | 0.0013 | 0.1241 | 226 | -0.0006 | 0.0016 | 0.7326 |

SUPPLEMENTARY DATA

| | | | | | | | | | | |
|------------------------------|--------|---------------|-----|---------|---------|--------|-----|---------|---------|--------|
| palmitic acid | PA | Verbal memory | 226 | 0.0029 | 0.0026 | 0.2625 | 226 | -0.0020 | 0.0033 | 0.5349 |
| stearic acid | SA | Verbal memory | 226 | -0.0023 | 0.0024 | 0.3292 | 226 | -0.0030 | 0.0031 | 0.3303 |
| arachidonoyl ethanolamide | AEA | Verbal memory | 225 | -3.2741 | 9.6233 | 0.7340 | 225 | -5.1354 | 11.0791 | 0.6435 |
| docosahexaenoyl ethanolamide | DHEA | Verbal memory | 226 | -1.0204 | 5.8632 | 0.8620 | 226 | 3.3584 | 7.5263 | 0.6559 |
| linoleoyl ethanolamide | LEA | Verbal memory | 225 | 2.1790 | 6.0848 | 0.7206 | 225 | -2.2894 | 6.6425 | 0.7307 |
| oleoyl ethanolamide | OEA | Verbal memory | 225 | -1.8760 | 3.9566 | 0.6359 | 225 | 0.4755 | 3.8964 | 0.9030 |
| palmitoyl ethanolamide | PEA | Verbal memory | 226 | -3.2807 | 2.4881 | 0.1887 | 226 | -2.5726 | 2.8100 | 0.3609 |
| stearoyl ethanolamide | SEA | Verbal memory | 226 | -6.5649 | 3.8874 | 0.0927 | 226 | 3.7518 | 4.3779 | 0.3924 |
| docosahexaenoyl glycerol 2&1 | 2-DHG | Verbal memory | 223 | 0.7200 | 2.0259 | 0.7226 | 223 | 0.3347 | 2.3494 | 0.8869 |
| linolenoyl glycerol 2&1 | 2-LnG | Verbal memory | 225 | 3.4141 | 2.2016 | 0.1224 | 225 | 0.0601 | 2.7110 | 0.9823 |
| oleoyl glycerol 2&1 | 2-OG | Verbal memory | 222 | 0.2704 | 0.4421 | 0.5414 | 222 | -0.1058 | 0.5271 | 0.8411 |
| palmitoyl glycerol 2&1 | 2-PG | Verbal memory | 226 | 0.0450 | 0.0594 | 0.4494 | 226 | 0.1086 | 0.0729 | 0.1377 |
| stearoyl glycerol 2&1 | 2-SG | Verbal memory | 224 | 0.0197 | 0.0164 | 0.2329 | 224 | 0.0218 | 0.0196 | 0.2664 |
| linoleoyl alanine | L-Ala | Verbal memory | 225 | 50.5517 | 32.9714 | 0.1267 | 225 | 7.9288 | 45.8069 | 0.8627 |
| oleoyl alanine | O-Ala | Verbal memory | 225 | 3.4660 | 6.2584 | 0.5803 | 225 | -0.7122 | 10.4965 | 0.9460 |
| palmitoyl alanine | P-Ala | Verbal memory | 225 | 4.7857 | 15.4322 | 0.7568 | 225 | -3.5887 | 24.0632 | 0.8816 |
| linolenoyl amide | Ln-Am | Verbal memory | 223 | 1.6366 | 0.9324 | 0.0807 | 223 | -1.8800 | 1.2947 | 0.1480 |
| linoleoyl amide | L-Am | Verbal memory | 224 | 0.1070 | 0.0994 | 0.2825 | 224 | -0.1506 | 0.1126 | 0.1823 |
| palmitoyl amide | P-Am | Verbal memory | 224 | 0.0484 | 0.0616 | 0.4330 | 224 | -0.0271 | 0.0735 | 0.7130 |
| linoleoyl glycine | L-Gly | Verbal memory | 225 | 4.7425 | 5.8242 | 0.4164 | 225 | -5.6272 | 7.1416 | 0.4316 |
| oleoyl glycine | O-Gly | Verbal memory | 226 | 1.3537 | 2.9793 | 0.6500 | 226 | 0.3261 | 3.2829 | 0.9210 |
| palmitoyl glycine | P-Gly | Verbal memory | 226 | -0.1441 | 1.4907 | 0.9231 | 226 | -0.2848 | 1.8852 | 0.8801 |
| linoleoyl leucine | L-Leu | Verbal memory | 224 | 14.9567 | 9.8437 | 0.1301 | 224 | -0.3837 | 10.9140 | 0.9720 |
| oleoyl leucine | O-Leu | Verbal memory | 224 | 5.2097 | 3.3377 | 0.1200 | 224 | -0.1088 | 3.5581 | 0.9756 |
| palmitoyl leucine | P-Leu | Verbal memory | 225 | -0.5662 | 21.4674 | 0.9790 | 225 | 10.4021 | 26.6489 | 0.6967 |
| linoleoyl serine | L-Ser | Verbal memory | 226 | 24.5790 | 15.5546 | 0.1155 | 226 | -1.7734 | 23.2761 | 0.9393 |
| oleoyl serine | O-Ser | Verbal memory | 225 | 3.5176 | 6.2795 | 0.5759 | 225 | 7.4768 | 7.5623 | 0.3239 |
| palmitoyl serine | P-Ser | Verbal memory | 226 | -4.3811 | 4.1984 | 0.2979 | 226 | -4.5583 | 5.1381 | 0.3760 |
| arachidonoyl serine | A-Ser | Verbal memory | 226 | -0.1115 | 1.1710 | 0.9242 | 226 | -0.1468 | 1.4870 | 0.9215 |
| linoleoyl phenylalanine | L-Phe | Verbal memory | 226 | 1.2761 | 1.1074 | 0.2505 | 226 | 0.4708 | 1.3195 | 0.7216 |
| arachidonoyl leucine | A-Leu | Verbal memory | 226 | 1.1220 | 1.2323 | 0.3636 | 226 | 3.2672 | 1.3502 | 0.0164 |
| docosahexaenoyl leucine | DH-Leu | Verbal memory | 226 | -0.4909 | 1.2512 | 0.6952 | 226 | -0.1738 | 1.4705 | 0.9060 |
| arachidonoyl glycine | A-Gly | Verbal memory | 226 | 0.6120 | 1.0643 | 0.5659 | 226 | -0.9173 | 1.3171 | 0.4869 |
| docosahexaenoyl glycine | DH-Gly | Verbal memory | 226 | -1.1627 | 1.1951 | 0.3317 | 226 | 0.6472 | 1.4027 | 0.6450 |
| stearidonoyl glycine | S-Gly | Verbal memory | 226 | 2.4417 | 1.0929 | 0.0265 | 226 | 1.2028 | 1.3426 | 0.3713 |
| linoleoyl valine | L-Val | Verbal memory | 226 | 1.3153 | 1.1203 | 0.2417 | 226 | 1.3137 | 1.3197 | 0.3207 |
| oleoyl valine | O-Val | Verbal memory | 226 | 0.6234 | 1.1817 | 0.5983 | 226 | 1.5749 | 1.3536 | 0.2459 |
| arachidonoyl glycerol 2&1 | 2-AG | Verbal memory | 226 | 0.5856 | 1.0644 | 0.5828 | 226 | -0.0531 | 1.3219 | 0.9680 |
| arachidonic acid | AA | Visual memory | 227 | 0.0042 | 0.0054 | 0.4351 | 227 | 0.0003 | 0.0068 | 0.9659 |
| docosahexaenoic acid | DHA | Visual memory | 227 | -0.0018 | 0.0057 | 0.7556 | 227 | -0.0026 | 0.0069 | 0.7048 |
| eicosapentaenoic acid | EPA | Visual memory | 225 | -0.0006 | 0.0120 | 0.9607 | 225 | -0.0168 | 0.0149 | 0.2602 |
| linoleic acid | LA | Visual memory | 227 | -0.0014 | 0.0015 | 0.3570 | 227 | 0.0020 | 0.0020 | 0.3152 |
| linolenic acid | LnA | Visual memory | 227 | -0.0019 | 0.0030 | 0.5152 | 227 | 0.0023 | 0.0041 | 0.5769 |
| oleic acid | OA | Visual memory | 227 | -0.0006 | 0.0010 | 0.5668 | 227 | 0.0008 | 0.0012 | 0.4951 |
| palmitic acid | PA | Visual memory | 227 | -0.0009 | 0.0019 | 0.6584 | 227 | 0.0011 | 0.0025 | 0.6481 |

SUPPLEMENTARY DATA

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|------------------------------|--------|--------------------|-----|----------|---------|--------|-----|----------|---------|--------|
| stearic acid | SA | Visual memory | 227 | 0.0004 | 0.0018 | 0.8271 | 227 | 0.0027 | 0.0023 | 0.2517 |
| arachidonoyl ethanolamide | AEA | Visual memory | 226 | -7.4333 | 7.2116 | 0.3038 | 226 | 7.3277 | 8.3403 | 0.3806 |
| docosahexaenoyl ethanolamide | DHEA | Visual memory | 227 | -4.9498 | 4.3444 | 0.2558 | 227 | 1.3619 | 5.6577 | 0.8100 |
| linoleoyl ethanolamide | LEA | Visual memory | 226 | -10.3366 | 4.2344 | 0.0154 | 226 | 8.9985 | 4.9427 | 0.0701 |
| oleoyl ethanolamide | OEA | Visual memory | 225 | -2.6229 | 2.9514 | 0.3752 | 225 | 3.1528 | 2.9112 | 0.2800 |
| palmitoyl ethanolamide | PEA | Visual memory | 226 | -4.1427 | 1.8383 | 0.0252 | 226 | -0.1583 | 2.1122 | 0.9403 |
| stearoyl ethanolamide | SEA | Visual memory | 226 | -4.5707 | 2.9063 | 0.1172 | 226 | 4.2395 | 3.3066 | 0.2012 |
| docosahexaenoyl glycerol 2&1 | 2-DHG | Visual memory | 224 | -1.2121 | 1.5158 | 0.4248 | 224 | 0.1295 | 1.7648 | 0.9416 |
| linolenoyl glycerol 2&1 | 2-LnG | Visual memory | 226 | 0.5194 | 1.6709 | 0.7562 | 226 | 1.3757 | 2.0754 | 0.5081 |
| oleoyl glycerol 2&1 | 2-OG | Visual memory | 223 | -0.1973 | 0.3296 | 0.5501 | 223 | -0.2492 | 0.3938 | 0.5275 |
| palmitoyl glycerol 2&1 | 2-PG | Visual memory | 227 | 0.0110 | 0.0446 | 0.8049 | 227 | 0.0986 | 0.0547 | 0.0729 |
| stearoyl glycerol 2&1 | 2-SG | Visual memory | 225 | -0.0039 | 0.0124 | 0.7558 | 225 | 0.0274 | 0.0147 | 0.0628 |
| linoleoyl alanine | L-Ala | Visual memory | 226 | -21.8744 | 24.6995 | 0.3768 | 226 | -6.1608 | 34.4724 | 0.8583 |
| oleoyl alanine | O-Ala | Visual memory | 226 | -2.8623 | 4.7072 | 0.5438 | 226 | -1.9348 | 7.9423 | 0.8078 |
| palmitoyl alanine | P-Ala | Visual memory | 226 | -15.3441 | 11.4908 | 0.1832 | 226 | -17.3884 | 18.0790 | 0.3372 |
| linolenoyl amide | Ln-Am | Visual memory | 224 | 1.3957 | 0.6799 | 0.0413 | 224 | -0.1137 | 0.9921 | 0.9089 |
| linoleoyl amide | L-Am | Visual memory | 225 | 0.1057 | 0.0688 | 0.1259 | 225 | -0.0726 | 0.0870 | 0.4051 |
| palmitoyl amide | P-Am | Visual memory | 225 | 0.0005 | 0.0440 | 0.9910 | 225 | -0.0510 | 0.0551 | 0.3556 |
| linoleoyl glycine | L-Gly | Visual memory | 226 | -4.6371 | 4.3839 | 0.2913 | 226 | 8.3756 | 5.3776 | 0.1208 |
| oleoyl glycine | O-Gly | Visual memory | 227 | -2.1022 | 2.2330 | 0.3475 | 227 | 5.0211 | 2.4522 | 0.0418 |
| palmitoyl glycine | P-Gly | Visual memory | 227 | -0.1412 | 1.1340 | 0.9010 | 227 | 2.8092 | 1.4230 | 0.0496 |
| linoleoyl leucine | L-Leu | Visual memory | 225 | 8.6166 | 7.4360 | 0.2478 | 225 | 0.2903 | 8.2890 | 0.9721 |
| oleoyl leucine | O-Leu | Visual memory | 225 | 1.3928 | 2.5489 | 0.5853 | 225 | -3.3328 | 2.6927 | 0.2172 |
| palmitoyl leucine | P-Leu | Visual memory | 226 | -18.5110 | 16.0893 | 0.2512 | 226 | -21.2381 | 20.1714 | 0.2936 |
| linoleoyl serine | L-Ser | Visual memory | 227 | 1.8550 | 11.7681 | 0.8749 | 227 | 4.2887 | 18.2619 | 0.8146 |
| oleoyl serine | O-Ser | Visual memory | 226 | 0.6789 | 4.7493 | 0.8865 | 226 | 8.1943 | 6.0207 | 0.1749 |
| palmitoyl serine | P-Ser | Visual memory | 227 | -1.1237 | 3.1451 | 0.7212 | 227 | -1.9812 | 4.0143 | 0.6221 |
| arachidonoyl serine | A-Ser | Visual memory | 227 | 0.1276 | 0.8842 | 0.8854 | 227 | 0.4806 | 1.1204 | 0.6684 |
| linoleoyl phenylalanine | L-Phe | Visual memory | 227 | 0.1359 | 0.8361 | 0.8710 | 227 | 0.0606 | 1.0054 | 0.9520 |
| arachidonoyl leucine | A-Leu | Visual memory | 227 | 1.7245 | 0.9112 | 0.0597 | 227 | 0.0163 | 1.0344 | 0.9874 |
| docosahexaenoyl leucine | DH-Leu | Visual memory | 227 | -0.0087 | 0.9439 | 0.9926 | 227 | -1.7976 | 1.1294 | 0.1129 |
| arachidonoyl glycine | A-Gly | Visual memory | 227 | -0.2854 | 0.7985 | 0.7211 | 227 | 0.0735 | 0.9957 | 0.9412 |
| docosahexaenoyl glycine | DH-Gly | Visual memory | 227 | -0.4692 | 0.8956 | 0.6009 | 227 | 0.3114 | 1.0737 | 0.7721 |
| stearidonoyl glycine | S-Gly | Visual memory | 227 | -0.5421 | 0.8161 | 0.5072 | 227 | -0.0209 | 1.0160 | 0.9836 |
| linoleoyl valine | L-Val | Visual memory | 227 | 0.5095 | 0.8343 | 0.5421 | 227 | -0.0254 | 0.9981 | 0.9797 |
| oleoyl valine | O-Val | Visual memory | 227 | -0.1463 | 0.8798 | 0.8681 | 227 | 0.5993 | 1.0224 | 0.5584 |
| arachidonoyl glycerol 2&1 | 2-AG | Visual memory | 227 | 0.0588 | 0.7952 | 0.9411 | 227 | -0.2917 | 1.0006 | 0.7709 |
| arachidonic acid | AA | Abstract reasoning | 230 | 0.0085 | 0.0061 | 0.1658 | 230 | -0.0003 | 0.0079 | 0.9736 |
| docosahexaenoic acid | DHA | Abstract reasoning | 229 | 0.0105 | 0.0068 | 0.1245 | 229 | -0.0007 | 0.0083 | 0.9359 |
| eicosapentaenoic acid | EPA | Abstract reasoning | 227 | 0.0197 | 0.0144 | 0.1730 | 227 | -0.0036 | 0.0180 | 0.8425 |
| linoleic acid | LA | Abstract reasoning | 230 | 0.0037 | 0.0017 | 0.0339 | 230 | 0.0038 | 0.0023 | 0.1040 |
| linolenic acid | LnA | Abstract reasoning | 230 | 0.0090 | 0.0035 | 0.0103 | 230 | 0.0054 | 0.0050 | 0.2773 |
| oleic acid | OA | Abstract reasoning | 230 | 0.0020 | 0.0012 | 0.0930 | 230 | 0.0021 | 0.0015 | 0.1585 |
| palmitic acid | PA | Abstract reasoning | 230 | 0.0056 | 0.0022 | 0.0106 | 230 | 0.0028 | 0.0028 | 0.3223 |
| stearic acid | SA | Abstract reasoning | 230 | 0.0026 | 0.0021 | 0.2144 | 230 | 0.0006 | 0.0028 | 0.8341 |

SUPPLEMENTARY DATA

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|------------------------------|--------|-------------------------|-----|---------|---------|--------|-----|---------|---------|--------|
| arachidonoyl ethanolamide | AEA | Abstract reasoning | 229 | 1.9336 | 8.6049 | 0.8224 | 229 | 6.3091 | 9.8438 | 0.5222 |
| docosahexaenoyl ethanolamide | DHEA | Abstract reasoning | 230 | 5.5808 | 5.2105 | 0.2853 | 230 | -1.0005 | 6.7969 | 0.8831 |
| linoleoyl ethanolamide | LEA | Abstract reasoning | 229 | 10.4372 | 5.0885 | 0.0414 | 229 | 3.5869 | 5.9513 | 0.5473 |
| oleoyl ethanolamide | OEA | Abstract reasoning | 228 | 2.9356 | 3.5025 | 0.4029 | 228 | 2.4471 | 3.5195 | 0.4876 |
| palmitoyl ethanolamide | PEA | Abstract reasoning | 229 | -0.9729 | 2.1893 | 0.6572 | 229 | 2.8519 | 2.4999 | 0.2552 |
| stearoyl ethanolamide | SEA | Abstract reasoning | 229 | -3.5990 | 3.4936 | 0.3041 | 229 | 5.5916 | 3.9194 | 0.1551 |
| docosahexaenoyl glycerol 2&1 | 2-DHG | Abstract reasoning | 227 | 0.8252 | 1.7670 | 0.6410 | 227 | 0.4635 | 2.1192 | 0.8271 |
| linolenoyl glycerol 2&1 | 2-LnG | Abstract reasoning | 229 | 3.5760 | 1.9807 | 0.0724 | 229 | -1.2373 | 2.4331 | 0.6116 |
| oleoyl glycerol 2&1 | 2-OG | Abstract reasoning | 226 | -0.1003 | 0.3974 | 0.8010 | 226 | -0.8336 | 0.4717 | 0.0786 |
| palmitoyl glycerol 2&1 | 2-PG | Abstract reasoning | 230 | 0.0169 | 0.0529 | 0.7491 | 230 | 0.0616 | 0.0627 | 0.3264 |
| stearoyl glycerol 2&1 | 2-SG | Abstract reasoning | 228 | 0.0139 | 0.0144 | 0.3374 | 228 | 0.0158 | 0.0161 | 0.3274 |
| linoleoyl alanine | L-Ala | Abstract reasoning | 229 | 88.0400 | 29.2309 | 0.0029 | 229 | 56.0667 | 40.8481 | 0.1713 |
| oleoyl alanine | O-Ala | Abstract reasoning | 229 | 13.6435 | 5.4026 | 0.0123 | 229 | 10.2550 | 8.7680 | 0.2434 |
| palmitoyl alanine | P-Ala | Abstract reasoning | 229 | 29.4693 | 13.4217 | 0.0292 | 229 | 18.5069 | 20.5173 | 0.3680 |
| linolenoyl amide | Ln-Am | Abstract reasoning | 227 | 0.1946 | 0.8253 | 0.8139 | 227 | -0.2242 | 1.1882 | 0.8505 |
| linoleoyl amide | L-Am | Abstract reasoning | 228 | -0.0844 | 0.0828 | 0.3089 | 228 | -0.0938 | 0.1025 | 0.3609 |
| palmitoyl amide | P-Am | Abstract reasoning | 228 | -0.1225 | 0.0531 | 0.0219 | 228 | -0.0350 | 0.0660 | 0.5966 |
| linoleoyl glycine | L-Gly | Abstract reasoning | 229 | 3.6179 | 5.2645 | 0.4927 | 229 | 6.2256 | 6.4585 | 0.3361 |
| oleoyl glycine | O-Gly | Abstract reasoning | 230 | 1.0041 | 2.6605 | 0.7062 | 230 | 3.3993 | 2.9506 | 0.2505 |
| palmitoyl glycine | P-Gly | Abstract reasoning | 230 | 1.6089 | 1.3483 | 0.2341 | 230 | 1.5939 | 1.6691 | 0.3406 |
| linoleoyl leucine | L-Leu | Abstract reasoning | 228 | 20.8566 | 8.7971 | 0.0186 | 228 | 10.4601 | 9.7327 | 0.2837 |
| oleoyl leucine | O-Leu | Abstract reasoning | 228 | 3.0193 | 3.0056 | 0.3162 | 228 | -0.1262 | 3.1758 | 0.9683 |
| palmitoyl leucine | P-Leu | Abstract reasoning | 229 | 35.7917 | 19.0264 | 0.0613 | 229 | 14.4065 | 23.6607 | 0.5432 |
| linoleoyl serine | L-Ser | Abstract reasoning | 230 | 22.9506 | 13.9814 | 0.1021 | 230 | 48.2162 | 20.7192 | 0.0209 |
| oleoyl serine | O-Ser | Abstract reasoning | 229 | 8.3343 | 5.4432 | 0.1272 | 229 | 9.5516 | 6.4838 | 0.1421 |
| palmitoyl serine | P-Ser | Abstract reasoning | 230 | 4.7026 | 3.6983 | 0.2049 | 230 | 8.1171 | 4.4937 | 0.0722 |
| arachidonoyl serine | A-Ser | Abstract reasoning | 230 | 0.8741 | 1.0432 | 0.4030 | 230 | 1.6116 | 1.3035 | 0.2176 |
| linoleoyl phenylalanine | L-Phe | Abstract reasoning | 230 | 2.0457 | 0.9809 | 0.0382 | 230 | 0.1090 | 1.1749 | 0.9261 |
| arachidonoyl leucine | A-Leu | Abstract reasoning | 230 | 2.6437 | 1.0741 | 0.0146 | 230 | 0.6314 | 1.2337 | 0.6093 |
| docosahexaenoyl leucine | DH-Leu | Abstract reasoning | 230 | 1.1242 | 1.1198 | 0.3165 | 230 | 0.2089 | 1.3303 | 0.8754 |
| arachidonoyl glycine | A-Gly | Abstract reasoning | 230 | -0.1174 | 0.9644 | 0.9032 | 230 | 1.7368 | 1.1795 | 0.1423 |
| docosahexaenoyl glycine | DH-Gly | Abstract reasoning | 230 | -0.4792 | 1.0596 | 0.6515 | 230 | -0.0829 | 1.2561 | 0.9475 |
| stearidonyl glycine | S-Gly | Abstract reasoning | 230 | 1.3971 | 0.9640 | 0.1487 | 230 | -0.4714 | 1.2013 | 0.6951 |
| linoleoyl valine | L-Val | Abstract reasoning | 230 | 2.0597 | 0.9965 | 0.0399 | 230 | 1.0261 | 1.1771 | 0.3843 |
| oleoyl valine | O-Val | Abstract reasoning | 230 | 3.0740 | 1.0304 | 0.0032 | 230 | 0.5341 | 1.2202 | 0.6620 |
| arachidonoyl glycerol 2&1 | 2-AG | Abstract reasoning | 230 | 0.0500 | 0.9536 | 0.9583 | 230 | 0.8595 | 1.1919 | 0.4716 |
| arachidonic acid | AA | Perceptual organization | 216 | 0.0004 | 0.0008 | 0.6318 | 216 | 0.0007 | 0.0011 | 0.4882 |
| docosahexaenoic acid | DHA | Perceptual organization | 215 | 0.0001 | 0.0010 | 0.8805 | 215 | 0.0004 | 0.0012 | 0.7028 |
| eicosapentaenoic acid | EPA | Perceptual organization | 213 | 0.0002 | 0.0021 | 0.9404 | 213 | 0.0008 | 0.0026 | 0.7583 |
| linoleic acid | LA | Perceptual organization | 216 | -0.0002 | 0.0002 | 0.4696 | 216 | 0.0006 | 0.0003 | 0.0425 |
| linolenic acid | LnA | Perceptual organization | 216 | -0.0003 | 0.0005 | 0.5356 | 216 | 0.0017 | 0.0007 | 0.0094 |
| oleic acid | OA | Perceptual organization | 216 | -0.0001 | 0.0002 | 0.6571 | 216 | 0.0004 | 0.0002 | 0.0585 |
| palmitic acid | PA | Perceptual organization | 216 | -0.0001 | 0.0003 | 0.6182 | 216 | 0.0005 | 0.0004 | 0.1777 |
| stearic acid | SA | Perceptual organization | 216 | -0.0001 | 0.0003 | 0.8457 | 216 | 0.0001 | 0.0004 | 0.7256 |
| arachidonoyl ethanolamide | AEA | Perceptual organization | 215 | -0.8131 | 1.1451 | 0.4785 | 215 | 1.3246 | 1.3043 | 0.3110 |

SUPPLEMENTARY DATA

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|------------------------------|--------|-------------------------|-----|---------|--------|--------|-----|---------|--------|--------|
| docosahexaenoyl ethanolamide | DHEA | Perceptual organization | 216 | -0.2948 | 0.7241 | 0.6844 | 216 | 0.1639 | 0.9759 | 0.8668 |
| linoleoyl ethanolamide | LEA | Perceptual organization | 215 | -0.6850 | 0.7354 | 0.3527 | 215 | 1.2680 | 0.7951 | 0.1123 |
| oleoyl ethanolamide | OEA | Perceptual organization | 215 | 0.0496 | 0.4728 | 0.9166 | 215 | 0.7209 | 0.4739 | 0.1297 |
| palmitoyl ethanolamide | PEA | Perceptual organization | 216 | -0.3296 | 0.2959 | 0.2665 | 216 | 0.1788 | 0.3426 | 0.6024 |
| stearoyl ethanolamide | SEA | Perceptual organization | 216 | -0.6693 | 0.5019 | 0.1838 | 216 | 0.3576 | 0.5425 | 0.5105 |
| docosahexaenoyl glycerol 2&1 | 2-DHG | Perceptual organization | 214 | -0.0518 | 0.2371 | 0.8271 | 214 | -0.2418 | 0.2820 | 0.3923 |
| linolenoyl glycerol 2&1 | 2-LnG | Perceptual organization | 215 | 0.0346 | 0.2729 | 0.8993 | 215 | -0.3471 | 0.3400 | 0.3085 |
| oleoyl glycerol 2&1 | 2-OG | Perceptual organization | 212 | 0.0079 | 0.0543 | 0.8840 | 212 | -0.1448 | 0.0644 | 0.0256 |
| palmitoyl glycerol 2&1 | 2-PG | Perceptual organization | 216 | 0.0078 | 0.0071 | 0.2747 | 216 | -0.0049 | 0.0084 | 0.5590 |
| stearoyl glycerol 2&1 | 2-SG | Perceptual organization | 214 | 0.0010 | 0.0019 | 0.6052 | 214 | -0.0009 | 0.0022 | 0.6787 |
| linoleoyl alanine | L-Ala | Perceptual organization | 215 | -1.5871 | 4.1346 | 0.7015 | 215 | -2.1615 | 5.5296 | 0.6963 |
| oleoyl alanine | O-Ala | Perceptual organization | 215 | -0.2395 | 0.7600 | 0.7530 | 215 | 0.4582 | 1.1831 | 0.6990 |
| palmitoyl alanine | P-Ala | Perceptual organization | 215 | -1.2878 | 1.8649 | 0.4906 | 215 | 0.1819 | 2.7879 | 0.9480 |
| linolenoyl amide | Ln-Am | Perceptual organization | 213 | 0.0094 | 0.1229 | 0.9392 | 213 | -0.1640 | 0.1620 | 0.3125 |
| linoleoyl amide | L-Am | Perceptual organization | 214 | -0.0028 | 0.0113 | 0.8022 | 214 | -0.0151 | 0.0138 | 0.2757 |
| palmitoyl amide | P-Am | Perceptual organization | 214 | -0.0041 | 0.0072 | 0.5704 | 214 | -0.0044 | 0.0089 | 0.6238 |
| linoleoyl glycine | L-Gly | Perceptual organization | 215 | -1.5697 | 0.7107 | 0.0283 | 215 | 1.7261 | 0.8658 | 0.0475 |
| oleoyl glycine | O-Gly | Perceptual organization | 216 | -0.6893 | 0.3578 | 0.0554 | 216 | 0.8552 | 0.3985 | 0.0330 |
| palmitoyl glycine | P-Gly | Perceptual organization | 216 | -0.2029 | 0.1810 | 0.2635 | 216 | 0.3598 | 0.2231 | 0.1082 |
| linoleoyl leucine | L-Leu | Perceptual organization | 214 | 0.8385 | 1.2481 | 0.5024 | 214 | -0.3084 | 1.3161 | 0.8150 |
| oleoyl leucine | O-Leu | Perceptual organization | 214 | 0.0177 | 0.4152 | 0.9661 | 214 | -0.3043 | 0.4266 | 0.4764 |
| palmitoyl leucine | P-Leu | Perceptual organization | 215 | 1.2925 | 2.6032 | 0.6201 | 215 | -1.8047 | 3.1895 | 0.5721 |
| linoleoyl serine | L-Ser | Perceptual organization | 216 | -2.5428 | 1.9224 | 0.1874 | 216 | 3.5409 | 2.9595 | 0.2329 |
| oleoyl serine | O-Ser | Perceptual organization | 215 | 0.1951 | 0.7607 | 0.7978 | 215 | 0.8466 | 0.9555 | 0.3766 |
| palmitoyl serine | P-Ser | Perceptual organization | 216 | -0.0634 | 0.5164 | 0.9024 | 216 | -1.1059 | 0.6289 | 0.0802 |
| arachidonoyl serine | A-Ser | Perceptual organization | 216 | 0.0027 | 0.1426 | 0.9847 | 216 | -0.0377 | 0.1765 | 0.8311 |
| linoleoyl phenylalanine | L-Phe | Perceptual organization | 216 | 0.0287 | 0.1380 | 0.8354 | 216 | -0.1127 | 0.1625 | 0.4889 |
| arachidonoyl leucine | A-Leu | Perceptual organization | 216 | 0.2786 | 0.1490 | 0.0629 | 216 | -0.1629 | 0.1664 | 0.3287 |
| docosahexaenoyl leucine | DH-Leu | Perceptual organization | 216 | 0.3176 | 0.1548 | 0.0415 | 216 | -0.1817 | 0.1882 | 0.3353 |
| arachidonoyl glycine | A-Gly | Perceptual organization | 216 | -0.2539 | 0.1307 | 0.0534 | 216 | 0.1854 | 0.1625 | 0.2550 |
| docosahexaenoyl glycine | DH-Gly | Perceptual organization | 216 | -0.1820 | 0.1458 | 0.2132 | 216 | 0.0884 | 0.1766 | 0.6172 |
| stearidonoyl glycine | S-Gly | Perceptual organization | 216 | 0.0127 | 0.1334 | 0.9240 | 216 | 0.1749 | 0.1641 | 0.2877 |
| linoleoyl valine | L-Val | Perceptual organization | 216 | 0.1894 | 0.1378 | 0.1709 | 216 | -0.0367 | 0.1602 | 0.8188 |
| oleoyl valine | O-Val | Perceptual organization | 216 | 0.1429 | 0.1438 | 0.3216 | 216 | 0.0315 | 0.1666 | 0.8503 |
| arachidonoyl glycerol 2&1 | 2-AG | Perceptual organization | 216 | -0.1360 | 0.1316 | 0.3028 | 216 | -0.3099 | 0.1609 | 0.0554 |
| arachidonic acid | AA | Attention | 226 | -0.0001 | 0.0006 | 0.8505 | 226 | 0.0000 | 0.0007 | 0.9979 |
| docosahexaenoic acid | DHA | Attention | 225 | 0.0010 | 0.0006 | 0.1242 | 225 | 0.0000 | 0.0008 | 0.9585 |
| eicosapentaenoic acid | EPA | Attention | 223 | 0.0020 | 0.0013 | 0.1487 | 223 | 0.0001 | 0.0017 | 0.9657 |
| linoleic acid | LA | Attention | 226 | 0.0001 | 0.0002 | 0.4604 | 226 | 0.0001 | 0.0002 | 0.5693 |
| linolenic acid | LnA | Attention | 226 | 0.0004 | 0.0003 | 0.1973 | 226 | 0.0002 | 0.0005 | 0.6805 |
| oleic acid | OA | Attention | 226 | 0.0001 | 0.0001 | 0.2733 | 226 | 0.0000 | 0.0001 | 0.8060 |
| palmitic acid | PA | Attention | 226 | 0.0002 | 0.0002 | 0.2413 | 226 | 0.0001 | 0.0003 | 0.5786 |
| stearic acid | SA | Attention | 226 | 0.0000 | 0.0002 | 0.9173 | 226 | 0.0000 | 0.0003 | 0.9186 |
| arachidonoyl ethanolamide | AEA | Attention | 225 | 0.3641 | 0.8155 | 0.6557 | 225 | -0.0023 | 0.9311 | 0.9980 |
| docosahexaenoyl ethanolamide | DHEA | Attention | 226 | 0.5231 | 0.4843 | 0.2813 | 226 | 0.6041 | 0.6314 | 0.3397 |

SUPPLEMENTARY DATA

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|------------------------------|--------|--------------------|-----|---------|--------|--------|-----|---------|--------|--------|
| linoleoyl ethanolamide | LEA | Attention | 225 | 0.0626 | 0.4827 | 0.8969 | 225 | 0.4660 | 0.5573 | 0.4040 |
| oleoyl ethanolamide | OEA | Attention | 224 | 0.3826 | 0.3285 | 0.2455 | 224 | 0.3309 | 0.3300 | 0.3170 |
| palmitoyl ethanolamide | PEA | Attention | 225 | 0.2637 | 0.2074 | 0.2049 | 225 | 0.0012 | 0.2373 | 0.9961 |
| stearoyl ethanolamide | SEA | Attention | 225 | 0.3642 | 0.3320 | 0.2739 | 225 | 0.4501 | 0.3746 | 0.2308 |
| docosahexaenoyl glycerol 2&1 | 2-DHG | Attention | 223 | 0.1220 | 0.1639 | 0.4573 | 223 | 0.1381 | 0.1965 | 0.4829 |
| linolenoyl glycerol 2&1 | 2-LnG | Attention | 225 | 0.1808 | 0.1868 | 0.3342 | 225 | 0.1907 | 0.2308 | 0.4097 |
| oleoyl glycerol 2&1 | 2-OG | Attention | 222 | 0.0255 | 0.0371 | 0.4929 | 222 | 0.0333 | 0.0442 | 0.4515 |
| palmitoyl glycerol 2&1 | 2-PG | Attention | 226 | -0.0068 | 0.0049 | 0.1692 | 226 | 0.0067 | 0.0058 | 0.2535 |
| stearoyl glycerol 2&1 | 2-SG | Attention | 224 | -0.0008 | 0.0014 | 0.5497 | 224 | 0.0021 | 0.0015 | 0.1613 |
| linoleoyl alanine | L-Ala | Attention | 226 | 0.1113 | 2.7937 | 0.9683 | 226 | 0.1721 | 3.8360 | 0.9642 |
| oleoyl alanine | O-Ala | Attention | 226 | 1.0659 | 0.5106 | 0.0380 | 226 | 0.1385 | 0.8258 | 0.8669 |
| palmitoyl alanine | P-Ala | Attention | 226 | 2.3876 | 1.2693 | 0.0613 | 226 | 0.6348 | 1.9401 | 0.7438 |
| linolenoyl amide | Ln-Am | Attention | 223 | 0.0405 | 0.0757 | 0.5931 | 223 | -0.0589 | 0.1086 | 0.5882 |
| linoleoyl amide | L-Am | Attention | 224 | 0.0150 | 0.0076 | 0.0497 | 224 | -0.0070 | 0.0094 | 0.4592 |
| palmitoyl amide | P-Am | Attention | 224 | 0.0036 | 0.0051 | 0.4831 | 224 | 0.0034 | 0.0062 | 0.5854 |
| linoleoyl glycine | L-Gly | Attention | 225 | -0.1635 | 0.4942 | 0.7412 | 225 | 0.1391 | 0.6067 | 0.8189 |
| oleoyl glycine | O-Gly | Attention | 226 | 0.2466 | 0.2493 | 0.3237 | 226 | 0.2008 | 0.2762 | 0.4680 |
| palmitoyl glycine | P-Gly | Attention | 226 | 0.0387 | 0.1259 | 0.7589 | 226 | 0.1263 | 0.1563 | 0.4202 |
| linoleoyl leucine | L-Leu | Attention | 224 | 0.1969 | 0.8405 | 0.8150 | 224 | 0.3013 | 0.9239 | 0.7447 |
| oleoyl leucine | O-Leu | Attention | 224 | 0.0211 | 0.2931 | 0.9428 | 224 | -0.0627 | 0.3029 | 0.8361 |
| palmitoyl leucine | P-Leu | Attention | 225 | -0.0811 | 1.8281 | 0.9646 | 225 | 0.9330 | 2.2317 | 0.6763 |
| linoleoyl serine | L-Ser | Attention | 226 | -1.9770 | 1.3257 | 0.1374 | 226 | 0.5098 | 2.0421 | 0.8031 |
| oleoyl serine | O-Ser | Attention | 225 | 0.0156 | 0.5153 | 0.9758 | 225 | 0.7166 | 0.6357 | 0.2608 |
| palmitoyl serine | P-Ser | Attention | 226 | 0.1984 | 0.3512 | 0.5727 | 226 | -0.2095 | 0.4400 | 0.6346 |
| arachidonoyl serine | A-Ser | Attention | 226 | -0.0381 | 0.0989 | 0.7005 | 226 | 0.2770 | 0.1216 | 0.0236 |
| linoleoyl phenylalanine | L-Phe | Attention | 226 | 0.0073 | 0.0938 | 0.9381 | 226 | 0.1681 | 0.1110 | 0.1314 |
| arachidonoyl leucine | A-Leu | Attention | 226 | -0.1235 | 0.1019 | 0.2272 | 226 | 0.1093 | 0.1157 | 0.3457 |
| docosahexaenoyl leucine | DH-Leu | Attention | 226 | 0.0342 | 0.1060 | 0.7474 | 226 | -0.1895 | 0.1271 | 0.1374 |
| arachidonoyl glycine | A-Gly | Attention | 226 | 0.0066 | 0.0907 | 0.9419 | 226 | -0.0452 | 0.1110 | 0.6845 |
| docosahexaenoyl glycine | DH-Gly | Attention | 226 | -0.0075 | 0.0999 | 0.9399 | 226 | -0.0042 | 0.1202 | 0.9722 |
| stearidonoyl glycine | S-Gly | Attention | 226 | -0.1597 | 0.0909 | 0.0802 | 226 | -0.0464 | 0.1137 | 0.6838 |
| linoleoyl valine | L-Val | Attention | 226 | -0.0128 | 0.0943 | 0.8924 | 226 | 0.0359 | 0.1109 | 0.7465 |
| oleoyl valine | O-Val | Attention | 226 | 0.0464 | 0.0984 | 0.6381 | 226 | 0.1665 | 0.1139 | 0.1451 |
| arachidonoyl glycerol 2&1 | 2-AG | Attention | 226 | 0.0178 | 0.0895 | 0.8429 | 226 | 0.1797 | 0.1116 | 0.1088 |
| arachidonic acid | AA | Executive function | 220 | 0.0007 | 0.0006 | 0.2461 | 220 | 0.0001 | 0.0007 | 0.8563 |
| docosahexaenoic acid | DHA | Executive function | 219 | 0.0004 | 0.0006 | 0.5822 | 219 | 0.0002 | 0.0008 | 0.7797 |
| eicosapentaenoic acid | EPA | Executive function | 217 | 0.0007 | 0.0013 | 0.5860 | 217 | 0.0001 | 0.0016 | 0.9532 |
| linoleic acid | LA | Executive function | 220 | 0.0002 | 0.0002 | 0.1346 | 220 | 0.0004 | 0.0002 | 0.0738 |
| linolenic acid | LnA | Executive function | 220 | 0.0007 | 0.0003 | 0.0286 | 220 | 0.0007 | 0.0004 | 0.1276 |
| oleic acid | OA | Executive function | 220 | 0.0002 | 0.0001 | 0.0760 | 220 | 0.0002 | 0.0001 | 0.1580 |
| palmitic acid | PA | Executive function | 220 | 0.0003 | 0.0002 | 0.0905 | 220 | 0.0003 | 0.0003 | 0.2230 |
| stearic acid | SA | Executive function | 220 | -0.0001 | 0.0002 | 0.6145 | 220 | 0.0001 | 0.0003 | 0.8423 |
| arachidonoyl ethanolamide | AEA | Executive function | 219 | 0.7876 | 0.7962 | 0.3237 | 219 | 1.6639 | 0.9257 | 0.0737 |
| docosahexaenoyl ethanolamide | DHEA | Executive function | 220 | -0.0227 | 0.4790 | 0.9622 | 220 | 0.2229 | 0.6197 | 0.7194 |
| linoleoyl ethanolamide | LEA | Executive function | 219 | 0.5240 | 0.4751 | 0.2713 | 219 | 1.3961 | 0.5383 | 0.0102 |

SUPPLEMENTARY DATA

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|------------------------------|--------|--------------------|-----|---------|--------|--------|-----|---------|--------|--------|
| oleoyl ethanolamide | OEA | Executive function | 218 | 0.4198 | 0.3136 | 0.1821 | 218 | 0.5094 | 0.3140 | 0.1062 |
| palmitoyl ethanolamide | PEA | Executive function | 219 | -0.0289 | 0.2026 | 0.8867 | 219 | 0.2756 | 0.2313 | 0.2349 |
| stearoyl ethanolamide | SEA | Executive function | 219 | 0.1078 | 0.3252 | 0.7405 | 219 | 0.4987 | 0.3679 | 0.1768 |
| docosahexaenoyl glycerol 2&1 | 2-DHG | Executive function | 217 | -0.0907 | 0.1624 | 0.5771 | 217 | -0.2252 | 0.1937 | 0.2465 |
| linolenoyl glycerol 2&1 | 2-LnG | Executive function | 219 | 0.0140 | 0.1843 | 0.9397 | 219 | -0.2473 | 0.2276 | 0.2784 |
| oleoyl glycerol 2&1 | 2-OG | Executive function | 216 | -0.0062 | 0.0370 | 0.8680 | 216 | -0.0858 | 0.0437 | 0.0510 |
| palmitoyl glycerol 2&1 | 2-PG | Executive function | 220 | -0.0024 | 0.0048 | 0.6214 | 220 | 0.0033 | 0.0057 | 0.5683 |
| stearoyl glycerol 2&1 | 2-SG | Executive function | 218 | 0.0002 | 0.0013 | 0.8727 | 218 | 0.0013 | 0.0015 | 0.3788 |
| linoleoyl alanine | L-Ala | Executive function | 220 | 5.3478 | 2.7097 | 0.0497 | 220 | 3.8558 | 3.7151 | 0.3005 |
| oleoyl alanine | O-Ala | Executive function | 220 | 1.1415 | 0.4939 | 0.0218 | 220 | 0.3603 | 0.7918 | 0.6496 |
| palmitoyl alanine | P-Ala | Executive function | 220 | 1.6195 | 1.2383 | 0.1923 | 220 | -0.6534 | 1.8776 | 0.7282 |
| linolenoyl amide | Ln-Am | Executive function | 217 | 0.1296 | 0.0759 | 0.0891 | 217 | -0.0347 | 0.1208 | 0.7744 |
| linoleoyl amide | L-Am | Executive function | 218 | 0.0065 | 0.0080 | 0.4180 | 218 | -0.0111 | 0.0116 | 0.3376 |
| palmitoyl amide | P-Am | Executive function | 218 | -0.0014 | 0.0050 | 0.7754 | 218 | -0.0082 | 0.0061 | 0.1757 |
| linoleoyl glycine | L-Gly | Executive function | 219 | 0.0764 | 0.4810 | 0.8739 | 219 | 0.8462 | 0.5872 | 0.1510 |
| oleoyl glycine | O-Gly | Executive function | 220 | 0.1322 | 0.2419 | 0.5851 | 220 | 0.5167 | 0.2650 | 0.0525 |
| palmitoyl glycine | P-Gly | Executive function | 220 | 0.0908 | 0.1227 | 0.4601 | 220 | 0.2806 | 0.1511 | 0.0648 |
| linoleoyl leucine | L-Leu | Executive function | 218 | 1.2362 | 0.8577 | 0.1510 | 218 | 0.4986 | 0.9103 | 0.5845 |
| oleoyl leucine | O-Leu | Executive function | 218 | 0.5134 | 0.2872 | 0.0753 | 218 | -0.0189 | 0.2964 | 0.9491 |
| palmitoyl leucine | P-Leu | Executive function | 219 | 0.6434 | 1.7954 | 0.7204 | 219 | 0.7818 | 2.1939 | 0.7219 |
| linoleoyl serine | L-Ser | Executive function | 220 | 2.7252 | 1.2889 | 0.0357 | 220 | 2.3209 | 1.9750 | 0.2413 |
| oleoyl serine | O-Ser | Executive function | 219 | 0.8079 | 0.5090 | 0.1140 | 219 | 0.5884 | 0.6267 | 0.3488 |
| palmitoyl serine | P-Ser | Executive function | 220 | 0.2262 | 0.3495 | 0.5182 | 220 | -0.2628 | 0.4375 | 0.5488 |
| arachidonoyl serine | A-Ser | Executive function | 220 | -0.0394 | 0.0963 | 0.6830 | 220 | 0.0181 | 0.1194 | 0.8800 |
| linoleoyl phenylalanine | L-Phe | Executive function | 220 | 0.1110 | 0.0922 | 0.2299 | 220 | 0.0612 | 0.1093 | 0.5764 |
| arachidonoyl leucine | A-Leu | Executive function | 220 | 0.1595 | 0.0991 | 0.1090 | 220 | 0.0842 | 0.1152 | 0.4655 |
| docosahexaenoyl leucine | DH-Leu | Executive function | 220 | -0.0639 | 0.1047 | 0.5419 | 220 | -0.1793 | 0.1274 | 0.1607 |
| arachidonoyl glycine | A-Gly | Executive function | 220 | 0.0766 | 0.0888 | 0.3895 | 220 | 0.0148 | 0.1089 | 0.8923 |
| docosahexaenoyl glycine | DH-Gly | Executive function | 220 | -0.0635 | 0.0988 | 0.5210 | 220 | -0.0045 | 0.1200 | 0.9704 |
| stearidonoyl glycine | S-Gly | Executive function | 220 | 0.0655 | 0.0906 | 0.4706 | 220 | -0.0090 | 0.1129 | 0.9366 |
| linoleoyl valine | L-Val | Executive function | 220 | 0.0344 | 0.0923 | 0.7098 | 220 | 0.0233 | 0.1084 | 0.8301 |
| oleoyl valine | O-Val | Executive function | 220 | 0.1354 | 0.0961 | 0.1603 | 220 | 0.0424 | 0.1124 | 0.7065 |
| arachidonoyl glycerol 2&1 | 2-AG | Executive function | 220 | -0.0255 | 0.0882 | 0.7725 | 220 | -0.1265 | 0.1104 | 0.2531 |

Cognitive function: Verbal memory = Logical Memory-Delayed Recall test; Visual memory = Visual Reproductions-Delayed Recall test; Abstract reasoning = Similarities test; Perceptual organization = Hooper Visual Organization Test; Attention = Trail-making Test A; Executive function = Trail-making Test B minus A. Models adjusted for age, age squared, sex, education, apolipoprotein ε4 genotype, obesity and time between blood draw and cognitive assessment.

SUPPLEMENTARY DATA

Supplementary Table 6. Significant interactions between eCBs levels and cognitive function in the various domains by sex. eCBs with at least one interaction with sex (P<0.1) are shown.

| Endocannabinoids | Abbreviation | Outcomes | Women | | | | | Men | | | | |
|-------------------------|--------------|-------------------------|-------|--------------------|----------------|---------------------------------|---------|-----|--------------------|----------------|---------------------------------|---------|
| | | | N | Parameter Estimate | Standard Error | standardized Parameter Estimate | P value | N | Parameter Estimate | Standard Error | standardized Parameter Estimate | P value |
| arachidonic acid | AA | Verbal memory | 137 | -0.0074 | 0.0045 | -0.1456 | 0.1003 | 89 | 0.0067 | 0.0054 | 0.1320 | 0.2197 |
| linoleic acid | LA | Verbal memory | 137 | -0.0026 | 0.0011 | -0.2004 | 0.0223 | 89 | 0.0008 | 0.0016 | 0.0533 | 0.6161 |
| linolenic acid | LnA | Verbal memory | 137 | -0.0061 | 0.0022 | -0.2349 | 0.0063 | 89 | 0.0017 | 0.0032 | 0.0550 | 0.6069 |
| stearoyl ethanolamide | SEA | Verbal memory | 137 | 1.4150 | 2.2427 | 0.0566 | 0.5292 | 89 | -5.1897 | 3.1038 | -0.1775 | 0.0984 |
| linolenoyl amide | Ln-Am | Verbal memory | 135 | -2.0119 | 0.5610 | -0.3008 | 0.0005 | 88 | -0.4387 | 0.7387 | -0.0639 | 0.5543 |
| stearidonoyl glycine | S-Gly | Verbal memory | 137 | -1.4431 | 0.7046 | -0.1771 | 0.0426 | 89 | 0.7711 | 0.8357 | 0.0981 | 0.3589 |
| linoleoyl ethanolamide | LEA | Visual memory | 135 | 2.3622 | 2.5322 | 0.0823 | 0.3527 | 91 | -6.8593 | 3.5464 | -0.1952 | 0.0565 |
| palmitoyl ethanolamide | PEA | Visual memory | 136 | 1.2569 | 1.1232 | 0.0996 | 0.2652 | 90 | -2.1624 | 1.4923 | -0.1480 | 0.1511 |
| linolenoyl amide | Ln-Am | Visual memory | 134 | -0.7732 | 0.4198 | -0.1576 | 0.0679 | 90 | 0.5391 | 0.5333 | 0.1015 | 0.3151 |
| arachidonoyl leucine | A-Leu | Visual memory | 136 | -0.6534 | 0.5319 | -0.1102 | 0.2216 | 91 | 0.8334 | 0.7726 | 0.1135 | 0.2839 |
| linoleic acid | LA | Abstract reasoning | 137 | -0.0016 | 0.0011 | -0.1232 | 0.1212 | 93 | 0.0019 | 0.0013 | 0.1467 | 0.1483 |
| linolenic acid | LnA | Abstract reasoning | 137 | -0.0025 | 0.0021 | -0.0945 | 0.2279 | 93 | 0.0065 | 0.0026 | 0.2429 | 0.0158 |
| oleic acid | OA | Abstract reasoning | 137 | -0.0009 | 0.0008 | -0.0965 | 0.2310 | 93 | 0.0012 | 0.0009 | 0.1451 | 0.1579 |
| palmitic acid | PA | Abstract reasoning | 137 | -0.0028 | 0.0014 | -0.1571 | 0.0492 | 93 | 0.0028 | 0.0016 | 0.1764 | 0.0836 |
| linoleoyl ethanolamide | LEA | Abstract reasoning | 136 | -0.8522 | 3.2048 | -0.0214 | 0.7907 | 93 | 8.4419 | 3.9664 | 0.2191 | 0.0362 |
| linolenoyl glycerol 2&1 | 2-LnG | Abstract reasoning | 137 | -2.4688 | 1.2295 | -0.1548 | 0.0467 | 92 | 0.6934 | 1.5173 | 0.0480 | 0.6489 |
| linoleoyl alanine | L-Ala | Abstract reasoning | 136 | -45.4926 | 22.4759 | -0.1728 | 0.0450 | 93 | 43.6794 | 20.1343 | 0.2193 | 0.0328 |
| oleoyl alanine | O-Ala | Abstract reasoning | 136 | -11.2408 | 4.0584 | -0.2339 | 0.0064 | 93 | 3.7272 | 3.7322 | 0.1026 | 0.3208 |
| palmitoyl alanine | P-Ala | Abstract reasoning | 136 | -28.8629 | 9.7380 | -0.2522 | 0.0036 | 93 | 4.1963 | 9.7344 | 0.0448 | 0.6675 |
| palmitoyl amide | P-Am | Abstract reasoning | 136 | 0.0354 | 0.0344 | 0.0800 | 0.3061 | 92 | -0.0910 | 0.0387 | -0.2379 | 0.0212 |
| linoleoyl leucine | L-Leu | Abstract reasoning | 137 | -8.6766 | 7.3574 | -0.0911 | 0.2404 | 91 | 10.6372 | 5.0268 | 0.2153 | 0.0373 |
| palmitoyl leucine | P-Leu | Abstract reasoning | 137 | -8.9541 | 14.9351 | -0.0480 | 0.5499 | 92 | 29.2102 | 11.9545 | 0.2443 | 0.0166 |
| linoleoyl phenylalanine | L-Phe | Abstract reasoning | 137 | -0.2124 | 0.7046 | -0.0235 | 0.7636 | 93 | 1.8360 | 0.6606 | 0.2746 | 0.0067 |
| arachidonoyl leucine | A-Leu | Abstract reasoning | 137 | -0.3075 | 0.6740 | -0.0377 | 0.6490 | 93 | 2.4969 | 0.8163 | 0.3150 | 0.0030 |
| linoleoyl valine | L-Val | Abstract reasoning | 137 | -0.3861 | 0.7209 | -0.0441 | 0.5931 | 93 | 1.6519 | 0.6708 | 0.2518 | 0.0158 |
| oleoyl valine | O-Val | Abstract reasoning | 137 | -0.8092 | 0.7198 | -0.0911 | 0.2630 | 93 | 2.2501 | 0.7116 | 0.3063 | 0.0022 |
| linoleoyl glycine | L-Gly | Perceptual organization | 127 | 0.8897 | 0.5097 | 0.1540 | 0.0835 | 88 | -0.7210 | 0.5180 | -0.1496 | 0.1678 |
| oleoyl glycine | O-Gly | Perceptual organization | 128 | 0.2715 | 0.2262 | 0.1120 | 0.2324 | 88 | -0.4295 | 0.2780 | -0.1632 | 0.1263 |
| arachidonoyl leucine | A-Leu | Perceptual organization | 128 | 0.0221 | 0.0922 | 0.0222 | 0.8112 | 88 | 0.2865 | 0.1206 | 0.2591 | 0.0199 |

SUPPLEMENTARY DATA

| | | | | | | | | | | | | |
|-------------------------|--------|-------------------------|-----|---------|--------|---------|--------|----|---------|--------|---------|--------|
| docosahexaenoyl leucine | DH-Leu | Perceptual organization | 128 | -0.0995 | 0.1042 | -0.0839 | 0.3415 | 88 | 0.2253 | 0.1141 | 0.2079 | 0.0517 |
| arachidonoyl glycine | A-Gly | Perceptual organization | 128 | 0.0990 | 0.0915 | 0.0986 | 0.2811 | 88 | -0.1729 | 0.0947 | -0.1931 | 0.0714 |
| oleoyl alanine | O-Ala | Attention | 134 | -0.5222 | 0.3910 | -0.1270 | 0.1841 | 92 | 0.6575 | 0.3426 | 0.1976 | 0.0584 |
| palmitoyl alanine | P-Ala | Attention | 134 | -0.8252 | 0.9446 | -0.0845 | 0.3840 | 92 | 1.7279 | 0.8870 | 0.2014 | 0.0548 |
| linoleoyl amide | L-Am | Attention | 133 | -0.0189 | 0.0049 | -0.3126 | 0.0002 | 91 | -0.0017 | 0.0057 | -0.0315 | 0.7668 |
| stearidonoyl glycine | S-Gly | Attention | 134 | 0.0485 | 0.0620 | 0.0679 | 0.4352 | 92 | -0.1016 | 0.0649 | -0.1604 | 0.1211 |
| linolenic acid | LnA | Executive function | 130 | -0.0007 | 0.0002 | -0.3111 | 0.0002 | 90 | -0.0001 | 0.0002 | -0.0241 | 0.8214 |
| oleic acid | OA | Executive function | 130 | -0.0002 | 0.0001 | -0.2631 | 0.0026 | 90 | 0.0000 | 0.0001 | -0.0470 | 0.6627 |
| palmitic acid | PA | Executive function | 130 | -0.0004 | 0.0001 | -0.2406 | 0.0061 | 90 | 0.0000 | 0.0001 | -0.0329 | 0.7599 |
| linoleoyl alanine | L-Ala | Executive function | 130 | -5.1026 | 2.0930 | -0.2269 | 0.0162 | 90 | 0.7589 | 1.8433 | 0.0445 | 0.6816 |
| oleoyl alanine | O-Ala | Executive function | 130 | -1.3625 | 0.3729 | -0.3319 | 0.0004 | 90 | -0.0785 | 0.3383 | -0.0251 | 0.8171 |
| linolenoyl amide | Ln-Am | Executive function | 128 | -0.1186 | 0.0514 | -0.1983 | 0.0227 | 89 | 0.0000 | 0.0534 | -0.0001 | 0.9996 |
| oleoyl leucine | O-Leu | Executive function | 130 | -0.3709 | 0.2519 | -0.1271 | 0.1435 | 88 | 0.1594 | 0.1504 | 0.1151 | 0.2925 |
| linoleoyl serine | L-Ser | Executive function | 130 | -1.9306 | 0.9270 | -0.1773 | 0.0394 | 90 | 0.7469 | 0.9112 | 0.0911 | 0.4148 |

Cognitive function: Verbal memory = Logical Memory-Delayed Recall test; Visual memory = Visual Reproductions-Delayed Recall test; Abstract reasoning = Similarities test; Perceptual organization = Hooper Visual Organization Test; Attention = Trail-making Test A; Executive function = Trail-making Test B minus A. Models adjusted for age, age squared, education, apolipoprotein $\epsilon 4$ genotype, obesity and time between blood draw and cognitive assessment.

Supplementary Table 7. Significant interactions between eCBs levels and cognitive function in the various domains by apolipoprotein $\epsilon 4$ genotype. eCBs with at least one interaction with apolipoprotein $\epsilon 4$ genotype ($P < 0.1$) are shown.

| Endocannabinoids | Abbreviation | Outcomes | no apolipoprotein $\epsilon 4$ genotype | | | | | with apolipoprotein $\epsilon 4$ genotype | | | | |
|------------------------|--------------|-------------------------|---|--------------------|----------------|---------------------------------|---------|---|--------------------|----------------|---------------------------------|---------|
| | | | N | Parameter Estimate | Standard Error | standardized Parameter Estimate | P value | N | Parameter Estimate | Standard Error | standardized Parameter Estimate | P value |
| Arachidonoyl leucine | A-Leu | Verbal memory | 181 | -1.4198 | 0.6349 | -0.1737 | 0.0266 | 45 | 3.0210 | 1.2486 | 0.3734 | 0.0206 |
| linoleoyl ethanolamide | LEA | Visual memory | 182 | -2.3316 | 2.3387 | -0.0767 | 0.3202 | 44 | 12.1494 | 4.3729 | 0.3836 | 0.0086 |
| palmitoyl glycerol 2&1 | 2-PG | Visual memory | 183 | -0.0101 | 0.0242 | -0.0303 | 0.6780 | 44 | 0.0640 | 0.0522 | 0.1792 | 0.2287 |
| stearoyl glycerol 2&1 | 2-SG | Visual memory | 181 | -0.0030 | 0.0069 | -0.0324 | 0.6596 | 44 | 0.0220 | 0.0134 | 0.2328 | 0.1097 |
| oleoyl glycine | O-Gly | Visual memory | 183 | -1.9376 | 1.1778 | -0.1275 | 0.1017 | 44 | 4.1018 | 2.2565 | 0.2556 | 0.0774 |
| palmitoyl glycine | P-Gly | Visual memory | 183 | -0.6747 | 0.6207 | -0.0835 | 0.2785 | 44 | 2.3286 | 1.2704 | 0.2468 | 0.0751 |
| oleoyl glycerol 2&1 | 2-OG | Abstract reasoning | 180 | 0.1059 | 0.2310 | 0.0316 | 0.6473 | 46 | -0.6703 | 0.3703 | -0.2637 | 0.0782 |
| linoleoyl serine | L-Ser | Abstract reasoning | 184 | 0.1148 | 7.6691 | 0.0010 | 0.9881 | 46 | 41.6109 | 19.9866 | 0.3493 | 0.0441 |
| palmitoyl serine | P-Ser | Abstract reasoning | 184 | -4.6708 | 2.0660 | -0.1589 | 0.0250 | 46 | 2.7778 | 3.9699 | 0.1100 | 0.4884 |
| linoleic acid | LA | Perceptual organization | 172 | -0.0002 | 0.0001 | -0.1061 | 0.1817 | 44 | 0.0007 | 0.0003 | 0.3103 | 0.0300 |

SUPPLEMENTARY DATA

| | | | | | | | | | | | | |
|---------------------------|-------|-------------------------|-----|---------|--------|---------|--------|----|---------|--------|---------|--------|
| linolenic acid | LnA | Perceptual organization | 172 | -0.0005 | 0.0002 | -0.1521 | 0.0531 | 44 | 0.0017 | 0.0006 | 0.3728 | 0.0099 |
| oleic acid | OA | Perceptual organization | 172 | -0.0001 | 0.0001 | -0.1135 | 0.1504 | 44 | 0.0003 | 0.0002 | 0.2644 | 0.0596 |
| oleoyl glycerol 2&1 | 2-OG | Perceptual organization | 168 | 0.0577 | 0.0303 | 0.1464 | 0.0587 | 44 | -0.0997 | 0.0607 | -0.2324 | 0.1090 |
| linoleoyl glycine | L-Gly | Perceptual organization | 171 | -0.2485 | 0.4094 | -0.0473 | 0.5447 | 44 | 1.8951 | 0.8070 | 0.3275 | 0.0245 |
| oleoyl glycine | O-Gly | Perceptual organization | 172 | -0.1969 | 0.1933 | -0.0814 | 0.3098 | 44 | 0.8080 | 0.3561 | 0.3029 | 0.0294 |
| palmitoyl serine | P-Ser | Perceptual organization | 172 | -0.1760 | 0.2803 | -0.0498 | 0.5310 | 44 | -1.4715 | 0.6244 | -0.3445 | 0.0240 |
| arachidonoyl glycerol 2&1 | 2-AG | Perceptual organization | 172 | 0.0586 | 0.0745 | 0.0614 | 0.4327 | 44 | -0.2203 | 0.1497 | -0.2067 | 0.1498 |
| arachidonoyl serine | A-Ser | Attention | 181 | -0.0845 | 0.0552 | -0.1133 | 0.1274 | 45 | 0.2687 | 0.1057 | 0.3801 | 0.0154 |
| linoleic acid | LA | Executive function | 176 | -0.0003 | 0.0001 | -0.2552 | 0.0008 | 44 | 0.0001 | 0.0002 | 0.0878 | 0.6063 |
| arachidonoyl ethanolamide | AEA | Executive function | 175 | -0.6372 | 0.4535 | -0.1056 | 0.1619 | 44 | 1.2282 | 0.8320 | 0.2420 | 0.1486 |
| linoleoyl ethanolamide | LEA | Executive function | 175 | -0.3903 | 0.2693 | -0.1116 | 0.1492 | 44 | 1.1419 | 0.4835 | 0.3834 | 0.0237 |
| oleoyl glycerol 2&1 | 2-OG | Executive function | 172 | 0.0074 | 0.0214 | 0.0260 | 0.7283 | 44 | -0.0891 | 0.0363 | -0.3727 | 0.0191 |
| oleoyl glycine | O-Gly | Executive function | 176 | -0.2954 | 0.1307 | -0.1737 | 0.0251 | 44 | 0.1986 | 0.2484 | 0.1322 | 0.4292 |
| palmitoyl glycine | P-Gly | Executive function | 176 | -0.1602 | 0.0694 | -0.1756 | 0.0222 | 44 | 0.1186 | 0.1372 | 0.1371 | 0.3932 |

Cognitive function: Verbal memory = Logical Memory-Delayed Recall test; Visual memory = Visual Reproductions-Delayed Recall test; Abstract reasoning = Similarities test; Perceptual organization = Hooper Visual Organization Test; Attention = Trail-making Test A; Executive function = Trail-making Test B minus A. Models adjusted for age, age squared, sex, education, obesity and time between blood draw and cognitive assessment.