with the current intake, recommendation most fitting to model, and 90%probability range of recommendations. PUFA Fiber Linoleic acid Alpha-linol. acid Vit. C EPA-fatty acid Protein Carboh. SFA MUFA Chol. Folic acid DHA-fatty acid $20.1\rightarrow$ $232\rightarrow$ 199→ 8.1 19.7 50.8 9.8 10.6 6.7 26.7 7.2 222 134 14 1.6 0.0 [46.8:54.6]

6.0

5.2

50.6

10.7

32.3 23.4

> 24.0 58.8

10.8

45.0

163→ 226→

145 230 140

 $261\rightarrow$ 200-

235 206 142

1.2

1.9

[22:381]

[10:116]

1.3

Table 1: Personal intake recommendations for Sysdimet study control cohort

104	$^{4.4\rightarrow}_{4.0}$ $_{[0.4;9.7]}$	$17.8 \rightarrow 16.8$ [13.2;19.9]	$48.7 \rightarrow 53.7$ [46.2;59.8]	$12.0 \rightarrow 8.8$ $[7.4;9.9]$	$^{10.1\rightarrow}_{11.8}_{[10.0;15.3]}$	$ \begin{array}{c} 5.1 \rightarrow \\ 7.6 \\ [5.5;9.9] \end{array} $	$24.0 \rightarrow 40.0$ $[24.9;54.4]$	$8.3 \rightarrow 93.9$ [78.5;99.8]	$3.8 \rightarrow 6.5$ [3.7;8.9]	$0.5 \rightarrow 0.9$ [0.5;2.0]	$^{346\rightarrow}_{54}$ [1;162]	$^{282\rightarrow}_{304}$ [154;500]	$^{161\rightarrow}$ 902 $_{[656;997]}$	$0.2 \rightarrow \\ 2.4$ [2.1;2.5]	$0.6 \rightarrow 0.1$ [0.0;0.3]
105	5.4 [0.6;9.8]	$^{21.4\rightarrow}_{15.7}$ [11.3;19.7]	$49.6 \rightarrow 53.7$ [45.9;59.8]	$\begin{array}{c} 10.8 \rightarrow \\ 9.1 \\ [7.8;10.0] \end{array}$	$7.3 \rightarrow 15.4$ $[10.7;19.7]$	$^{4.9 \rightarrow}_{7.6}$ $_{[5.5;9.9]}$	$19.8 \rightarrow 51.1$ [39.7;54.9]	$\begin{array}{c} 8.3 \rightarrow \\ {\bf 57.4} \\ [28.9;84.0] \end{array}$	$1.7 \rightarrow 6.9$ [4.6;8.9]	$0.3 \rightarrow 0.8$ [0.5;1.6]	$^{210\rightarrow}$ 89 $_{[3;199]}$	$311 \rightarrow 349$ [117;836]	$^{219}\rightarrow$ 41 [11;117]	$0.0 \rightarrow \\ 1.1 \\ [0.8;1.4]$	$0.1 \rightarrow 0.1$ [0.0;0.3]
107	$7.9 \rightarrow 4.2$ $[0.4;9.6]$	$^{13.7\rightarrow}_{14.5}_{[10.4;19.0]}$	$^{40.6\rightarrow}_{49.2}_{[40.8;58.4]}$	$13.7 \rightarrow 8.9$ [7.6;9.9]	$^{15.5\to}_{14.4}_{\tiny{[10.3;19.0]}}$	$^{6.4 o }_{7.3}$ $_{[5.4;9.7]}$	$14.9 \rightarrow 41.2$ [24.4;54.6]	$^{9.9 o}$ $^{44.8}$ $_{[12.8;80.0]}$	$3.1 \rightarrow 6.4$ $[3.4;8.9]$	$0.8 \rightarrow \\ 1.1 \\ [0.5;2.6]$	156 [19;282]	$239 \rightarrow 237$ [161;304]	$^{120\rightarrow}$ 84 [16;158]	$0.1 \rightarrow \\ 1.3 \\ [0.7;1.7]$	$0.2 \rightarrow 0.1$ [0.0;0.4]
	6.3→	$17.8 \rightarrow$	54.0→	$11.4 \rightarrow$	8.8→	4.0→ 7.6	15.2→ 52.5	5.6→	3.2→	0.6→	^{222→} 78	^{203→} 956	61 → 934	0.0→	0.1→
108	5.2 [1.0;9.6]	15.4 [11.0;19.7]	52.5 [43.4;59.7]	8.9 [7.8;10.0]	11.3 [10.0;14.8]	7.6 [5.5;9.8]	52.5 [46.4;54.9]	79.8 [41.8;99.0]	6.5 [3.8;8.9]	0.9 [0.5;1.8]	[2;188]	[855;999]	[766;998]	1.8 [1.3;2.3]	0.3 [0.0;1.1]
108															

121	0.0 [0.0;0.0]	0.0 [0.0;0.0]	0.0 [0.0;0.0]	0.0 [0.0;0.0]	0.0 [0.0;0.0]	0.0 [0.0;0.0]	0.0 [0.0;0.0]	0.0 [0.0;0.0]	0.0 [0.0;0.0]	0.0 [0.0;0.0]	0 [0;0]	0 [0;0]	0 [0;0]	0.0 [0.0;0.0]	0.0 [0.0;0.0]
18	5.2 [2.3;9.3]	19.3 [17.1;20.0]	$^{42.9\rightarrow}_{43.4}_{[40.6;48.1]}$	$\begin{array}{c} 14.0 \rightarrow \\ 9.7 \\ [8.7;10.0] \end{array}$	$^{9.4\rightarrow}_{10.4}_{\tiny{[10.0;11.5]}}$	$4.4 \rightarrow 5.9$ [5.0;7.4]	$17.0 \rightarrow 26.5$ [20.3;35.4]	$ \begin{array}{c} 4.1 \rightarrow \\ 36.1 \\ [12.0;63.4] \end{array} $	7.9 [5.5;9.0]	$0.9 \rightarrow 0.6$ [0.5;1.0]	$229 \rightarrow 225$ [186;254]	$203 \rightarrow 204$ [157;248]	$^{48\rightarrow}$ 80 [21;193]	$0.1 \rightarrow \\ 1.2 \\ [0.9;1.5]$	$0.2 \rightarrow 0.1$ [0.0;0.2]
19	$5.8 \rightarrow 3.8$ [0.4;9.5]	$^{18.8 \rightarrow}_{15.0}_{[10.6;19.4]}$	$^{47.4\rightarrow}_{50.0}_{[41.0;58.9]}$	$\begin{array}{c} 13.4 \rightarrow \\ 8.5 \\ [7.2;9.9] \end{array}$	$^{8.8 \rightarrow}_{\begin{subarray}{c} 14.8 \\ [10.4;19.4] \end{subarray}}$	$^{4.7 o}_{7.3}$ $_{[5.3;9.7]}$	$18.0 \rightarrow 35.0$ [22.3;53.7]	$5.9 \rightarrow 48.0$ $[4.1;98.0]$	5.8 [2.9;8.7]	$ \begin{array}{c} 1.0 \rightarrow \\ 2.6 \\ [0.6; 4.7] \end{array} $	$^{233}\rightarrow$ 147 [16;282]	$\begin{array}{c} 233 \rightarrow \\ 276 \\ [130;463] \end{array}$	$^{106 o }_{602}$ [118;962]	$0.1 \rightarrow 1.6$ [1.0;2.4]	$\begin{array}{c} 0.2 \rightarrow \\ 1.0 \\ [0.0; 2.0] \end{array}$
44	8.2→ 2.4	13.9→ 17.4	44.7→ 47.9	13.5→ 9.0	11.4→ 11.5	4.9→ 7.0	17.6→ 49.3	7.6→ 12.1	3.6→ 6.5	0.8→ 0.9	^{292→} 164	254→ 302	92→ 846	0.1→ 1.0	0.3→ 0.1

10	[2.3;9.3]	[17:1;20:0]	[40.6;48.1]	[8.7;10.0]	[10.0;11.5]	[5.0;7.4]	[20.3;35.4]	[12.0;63.4]	[5.5;9.0]	[0.5;1.0]	[186;254]	[157;248]	[21;193]	[0.9;1.5]	[0.0;0.2]
19	$5.8 \rightarrow 3.8$ $[0.4;9.5]$	$^{18.8\rightarrow}_{15.0}_{\tiny{[10.6;19.4]}}$	$\begin{array}{c} 47.4 \rightarrow \\ 50.0 \\ [41.0;58.9] \end{array}$	$13.4 \rightarrow 8.5$ $[7.2;9.9]$	$^{8.8\rightarrow}_{\begin{subarray}{c} 14.8 \\ [10.4;19.4] \end{subarray}}$	7.3 [5.3;9.7]	$18.0 \rightarrow 35.0$ [22.3;53.7]	$^{5.9 o }_{48.0}$ $_{[4.1;98.0]}$	5.8 [2.9;8.7]	$ \begin{array}{c} 1.0 \rightarrow \\ 2.6 \\ [0.6;4.7] \end{array} $	$^{233}\rightarrow$ 147 [16;282]	$\begin{array}{c} 233 \rightarrow \\ 276 \\ [130;463] \end{array}$	$^{106 ightarrow}_{602}$ [118;962]	$0.1 \rightarrow 1.6$ [1.0;2.4]	$\begin{array}{c} 0.2 \rightarrow \\ 1.0 \\ [0.0;2.0] \end{array}$
44	$^{8.2 o}_{\begin{subarray}{c} 8.2 o \\ \begin{subarray}{c} 2.4 \end{subarray}}$ $_{[0.2;7.1]}$	$13.9 \rightarrow 17.4$ [14.0;19.9]	$44.7 \rightarrow 47.9$ $[42.2;53.8]$	$\begin{array}{c} 13.5 \rightarrow \\ {f 9.0} \\ [7.7;10.0] \end{array}$	$^{11.4\rightarrow}_{11.5}_{[10.1;14.8]}$	$^{4.9 o}_{7.0}$ $_{[5.2;9.4]}$	$17.6 \rightarrow 49.3$ [32.7;54.9]	$7.6 \rightarrow 12.1$ [5.1;23.9]	$^{3.6 o}_{6.5}$ $_{[3.6;8.9]}$	$0.8 \rightarrow 0.9$ [0.5;2.1]	$^{292 o}_{f 164}$ [23;290]	$^{254\rightarrow}_{302}$ [162;498]	$ \begin{array}{c} 92 \rightarrow \\ 846 \\ [570;994] \end{array} $	$0.1 \rightarrow 1.0$ [0.6;1.4]	$0.3 \rightarrow 0.1$ [0.0;0.4]
48	4.0→ 3.9	$^{16.4\rightarrow}_{15.7}$	$^{41.6\rightarrow}_{45.9}$	16.4→ 8.6	$^{12.8\rightarrow}_{13.9}$	5.2→ 5.3	$\begin{array}{c} 19.4 \rightarrow \\ 28.3 \end{array}$	11.5→ 12.4	2.6→ 6.0	1.2→ 1.9	$224 \rightarrow 203$	$217 \rightarrow 220$	68→ 590	0.0→ 0.2	0.1→ 0.2

	[0.4;9.5]	[10.6;19.4]	[41.0;58.9]	[7.2;9.9]	[10.4;19.4]	[5.3;9.7]	[22.3;53.7]	[4.1;98.0]	[2.9;8.7]	[0.6;4.7]	[16;282]	[130;463]	[118;962]	[1.0;2.4]	[0.0;2.0]
44	$^{8.2 o}_{\begin{subarray}{c} 8.2 o \\ \begin{subarray}{c} 2.4 \\ \begin{subarray}{c} [0.2;7.1] \end{subarray}$	$^{13.9 \rightarrow}_{17.4}_{[14.0;19.9]}$	$44.7 \rightarrow 47.9$ $[42.2;53.8]$	$\begin{array}{c} 13.5 \rightarrow \\ 9.0 \\ [7.7;10.0] \end{array}$	$^{11.4\rightarrow}_{11.5}_{[10.1;14.8]}$	$^{4.9 o}_{7.0}$ $_{[5.2;9.4]}$	$17.6 \rightarrow 49.3$ [32.7;54.9]	$7.6 \rightarrow 12.1$ $[5.1;23.9]$	$\begin{array}{c} 3.6 \rightarrow \\ \textbf{6.5} \\ [3.6; 8.9] \end{array}$	$0.8 \rightarrow 0.9$ [0.5;2.1]	$^{292 o}_{f 164}$ [23;290]	$^{254 o}_{302}$ [162;498]	$ \begin{array}{c} 92 \rightarrow \\ 846 \\ [570;994] \end{array} $	$0.1 \rightarrow 1.0$ [0.6;1.4]	0.3 → 0.1 [0.0;0.4]
48	$\begin{array}{c} 4.0 \rightarrow \\ 3.9 \\ [0.9; 8.9] \end{array}$	$16.4 \rightarrow 15.7$ [11.9;19.4]	$^{41.6\rightarrow}_{45.9}_{[40.3;53.4]}$	$\begin{array}{c} 16.4 \rightarrow \\ 8.6 \\ [7.2;9.9] \end{array}$	$^{12.8\rightarrow}_{13.9}_{\tiny{[10.4;17.3]}}$	$5.2 \rightarrow 5.3$ [5.0;5.7]	$^{19.4 ightarrow}_{28.3}$ $_{[20.4;41.0]}$	$11.5 \rightarrow 12.4$ [4.7;22.3]	$^{2.6}\rightarrow$ $_{6.0}$ $_{[2.9;8.8]}$	$1.2 \rightarrow 1.9$ $[0.5;3.5]$	$224 \rightarrow 203$ [132;268]	$217 \rightarrow 220$ [177;269]	68→ 590 [427;743]	$0.0 \rightarrow 0.2$ [0.0;1.0]	0.1 → 0.2 [0.0;0.6]
	0.0	010.			20.0	40.	140.		0.0	0.5	100 -	107		0.0	0.5

44	2.4 $[0.2;7.1]$	$13.9 \rightarrow 17.4$ [14.0;19.9]	$44.7 \rightarrow 47.9$ [42.2;53.8]	13.5 → 9.0 [7.7;10.0]	11.4→ 11.5 [10.1;14.8]	4.9→ 7.0 [5.2;9.4]	$17.6 \rightarrow 49.3$ [32.7;54.9]	$7.6 \rightarrow$ 12.1 [5.1;23.9]	3.6→ 6.5 [3.6;8.9]	0.8→ 0.9 [0.5;2.1]	292→ 164 [23;290]	254→ 302 [162;498]	92→ 846 [570;994]	0.1→ 1.0 [0.6;1.4]	0.3→ 0.1 [0.0;0.4]
48	$4.0 \rightarrow 3.9$ [0.9;8.9]	$16.4 \rightarrow 15.7$ [11.9;19.4]	$41.6 \rightarrow 45.9$ $[40.3;53.4]$	$16.4 \rightarrow 8.6$ [7.2;9.9]	$^{12.8\rightarrow}_{13.9}_{\tiny{[10.4;17.3]}}$	$5.2 \rightarrow 5.3$ [5.0;5.7]	$19.4 \rightarrow 28.3$ [20.4;41.0]	$11.5 \rightarrow 12.4$ [4.7;22.3]	$^{2.6}\rightarrow$ $_{6.0}$ $_{[2.9;8.8]}$	$1.2 \rightarrow 1.9$ [0.5;3.5]	$224 \rightarrow 203$ [132;268]	$217 \rightarrow 220$ [177;269]	68→ 590 [427;743]	$0.0 \rightarrow 0.2$ [0.0;1.0]	$0.1 \rightarrow 0.2$ [0.0;0.6]
55	$2.9 \rightarrow 2.7$	$^{24.2 o}_{17.0}$	$^{41.9 o }_{42.7}$	9.0→ 9.1	$^{7.6 o}_{12.7}$	4.2→ 6.7	$14.2 \rightarrow 50.4$	5.5→ 8.4	3.0→ 7.1	0.5→ 0.7	$^{189\rightarrow}$ 163	$^{167\rightarrow}$ 202	84→ 86	0.2→ 0.6	0.5→ 0.1

48	4.0→ 3.9 [0.9;8.9]	16.4→ 15.7 [11.9;19.4]	41.6→ 45.9 [40.3;53.4]	16.4→ 8.6 [7.2;9.9]	$12.8 \rightarrow 13.9$ [10.4;17.3]	5.2→ 5.3 [5.0;5.7]	$19.4 \rightarrow 28.3$ [20.4;41.0]	$11.5 \rightarrow 12.4$ [4.7;22.3]	2.6→ 6.0 [2.9;8.8]	$1.2 \rightarrow 1.9$ $[0.5;3.5]$	$224 \rightarrow 203$ [132;268]	$217 \rightarrow 220$ [177;269]	68→ 590 [427;743]	0.0→ 0.2 [0.0;1.0]	0.1 → 0.2 [0.0;0.6]
55	$2.9 \rightarrow 2.7$ [0.4;6.7]	$\begin{array}{c} 24.2 \rightarrow \\ 17.0 \\ [13.0;19.9] \end{array}$	$^{41.9\rightarrow}_{42.7}_{[40.1;48.8]}$	$\begin{array}{c} 9.0 \to \\ 9.1 \\ [8.0;10.0] \end{array}$	$^{7.6 ightarrow}_{f 12.7}_{[10.1;16.4]}$	$^{4.2 o}_{6.7}$ $_{[5.1;9.1]}$	$14.2 \rightarrow 50.4$ $[38.2;54.9]$	$5.5 \rightarrow 8.4$ $[3.7;17.9]$	7.1 $[4.6;9.0]$	$0.5 \rightarrow \\ 0.7 \\ [0.5;1.2]$	$189 \rightarrow \\163\\[83;234]$	$^{167\rightarrow}_{\begin{subarray}{c}202\\[114;322]\end{subarray}}$	$\begin{array}{c} 84 \to \\ 86 \\ [36;138] \end{array}$	$0.2 \rightarrow 0.6$ [0.3;0.9]	$0.5 \rightarrow 0.1$ [0.0;0.5]

	[0.9;8.9]	[11.9;19.4]	[40.3;53.4]	[7:2;9.9]	[10.4;17.3]	[5.0;5.7]	[20.4;41.0]	[4.7;22.3]	[2.9;8.8]	[0.5;3.5]	[132;268]	[177;269]	[427;743]	[0.0;1.0]	[0.0;0.6]
55	$2.9 \rightarrow 2.7$ $[0.4;6.7]$	$^{24.2\rightarrow}_{17.0}$ $_{[13.0;19.9]}$	$^{41.9\rightarrow}_{42.7}$ $_{[40.1;48.8]}$	$\begin{array}{c} 9.0 \to \\ 9.1 \\ [8.0;10.0] \end{array}$	$\begin{array}{c} 7.6 \rightarrow \\ 12.7 \\ [10.1;16.4] \end{array}$	$^{4.2 o}_{6.7}$ $_{[5.1;9.1]}$	$14.2 \rightarrow 50.4$ $[38.2;54.9]$	$\begin{array}{c} 5.5 \rightarrow \\ 8.4 \\ [3.7;17.9] \end{array}$	$^{3.0 o}$ $^{7.1}$ $_{[4.6;9.0]}$	$0.5 \rightarrow 0.7$ [0.5;1.2]	$189 \rightarrow 163$ [83;234]	$167 \rightarrow 202$ [114;322]	$\begin{array}{c} 84 \to \\ 86 \\ [36;138] \end{array}$	$0.2 \rightarrow \\ 0.6 \\ [0.3;0.9]$	$0.5 \rightarrow 0.1$ [0.0;0.5]
64	$4.0 \rightarrow 4.5$ [0.6;9.6]	14.7 [10.3;19.3]	$45.6 \rightarrow 48.0$ [41.6;53.8]	$11.5 \rightarrow 8.8$ [7.4;9.9]	$10.3 \rightarrow 11.3$ [10.0;14.5]	$^{4.9\rightarrow}_{7.1}$ [5.2;9.6]	$16.5 \rightarrow 38.0$ [22.6;54.2]	$6.1 \rightarrow 33.3$ [4.3;90.8]	3.4→ 6.0 [3.0;8.8]	$0.7 \rightarrow \\ 1.8 \\ [0.5;3.5]$	$^{306\rightarrow}$ 152 [17;288]	$167 \rightarrow 314$ [120;761]	54→ 882 [608;997]	$0.1 \rightarrow 0.2$ $[0.0;0.7]$	$0.2 \rightarrow 0.2$ [0.0;0.9]

55	$\frac{2.7}{[0.4;6.7]}$	17.0 [13.0;19.9]	42.7 [40.1;48.8]	9.1 $[8.0;10.0]$	12.7 [10.1;16.4]	6.7 [5.1;9.1]	50.4 [38.2;54.9]	8.4 [3.7;17.9]	7.1 [4.6;9.0]	0.7 [0.5;1.2]	163 [83;234]	202 [114;322]	86 [36;138]	0.6 [0.3;0.9]	0.1 [0.0;0.5]
64	$^{4.0 o }_{4.5}$ $^{[0.6;9.6]}$	$^{21.4\rightarrow}_{\ensuremath{14.7}}$ $_{[10.3;19.3]}$	$^{45.6\rightarrow}_{48.0}$ [41.6;53.8]	$\begin{array}{c} 11.5 \rightarrow \\ 8.8 \\ [7.4;9.9] \end{array}$	$10.3 \rightarrow 11.3$ [10.0;14.5]	$^{4.9 o}_{7.1}$ [5.2;9.6]	$16.5 \rightarrow \\ 38.0$ [22.6;54.2]	$^{6.1\rightarrow}_{33.3}$ $_{[4.3;90.8]}$	3.4→ 6.0 [3.0;8.8]	$0.7 \rightarrow 1.8$ $[0.5;3.5]$	$^{306 ightarrow}$ 152 [17;288]	$167 \rightarrow 314$ [120;761]	54→ 882 [608;997]	$0.1 \rightarrow 0.2$ [0.0;0.7]	$0.2 \rightarrow 0.2 \\ 0.2 \\ [0.0;0.9]$
69	11.5→ 9.0	18.0→ 18.6	51.1→ 53.9	12.2→ 9.9	$^{9.6 o }_{10.2}$	3.9→ 8.4	20.8→ 53.7	9.6→ 37.3	3.0→ 8.7	$0.6\rightarrow$ 0.5	^{411→} 62	$346\rightarrow$ 190	$^{264\rightarrow}$ 39	0.1→ 1.6	0.3→ 0.0

6.3