

VI. Blood and Urine Analysis

Venous blood sample and urine were obtained after an overnight fast.
Urine is analyzed using semi-quantitative test tape.

1) Blood chemistry

Total protein (g/dL)
Total bilirubin (mg/dL)
Triglyceride (mg/dL)
Total cholesterol (mg/dL)
HDL-cholesterol (mg/dL)
Lipid peroxide (nmol/mL)
Uric acid (mg/dL)
Creatinine (mg/dL)
Calcium (mg/dL)
Phosphorus (mg/dL)
Glutamate oxaloacetate transaminase, GOT (IU/L)
Glutamate pyruvate transaminase, GPT (IU/L)
Alkaline phosphatase (IU/L)
Gamma-glutamyltransferase (IU/L)
Cholinesterase (IU/L)
Magnesium (mg/dL)
Iron (micro g/dL)
Zinc (micro g/dL)
Vitamin A (IU/dL)
Free triiodothyronine, Free T3 (pg/mL)
Free thyroxine, Free T4 (ng/dL)
Thyroid stimulating hormone, TSH (micro IU/mL)
Dehydroepiandrosterone sulfate, DHEA-S (ng/mL)
Fasting insulin (micro U/mL)
Sialic acid (mg/dL)
Fasting glucose (mg/dL)
Hemoglobin A1c (%)
Albumin (g/dL) direct method

2) Serum fatty acid

Dihomo-gamma-linolenic acid, DHGLA (micro g/mL)
Arachidonic acid, AA (micro g/mL)
Eicosapentaenoic acid, EPA (micro g/mL)
Docosahexaenoic acid, DHA (micro g/mL)

3) Complete blood cell count

White blood cell count (/micro L)
Red blood cell count (x10000/micro L)
Hemoglobin (g/dL)
Hematocrit (%)
MCV (fL)
MCH (pg)
MCHC (%)
Platelet count (x10000/micro L)

4) Urine analysis

Hemoglobin (/micro L)
Occult blood (/micro L)
Ketone body (mg/dL)
Bilirubin (mg/dL)

Urobilinogen (mg/dL)
Protein (mg/dL)
Glucose (mg/dL)
pH
Nitrite

1) Blood chemistry

Total protein (g/dL)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			80yr –			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	7.5	0.4	273	7.6	0.5	294	7.6	0.5	290	7.8	0.5	275	7.8	0.5	17	7.6	0.5	1149
Female	7.6	0.4	261	7.7	0.4	284	7.7	0.4	270	7.7	0.5	268	7.7	0.5	21	7.7	0.4	1104
Total	7.5	0.4	534	7.6	0.4	578	7.7	0.5	560	7.7	0.5	543	7.7	0.5	38	7.6	0.5	2253

Total Bilirubin (mg/dL)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			80yr –			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.8	0.3	273	0.7	0.3	294	0.7	0.3	290	0.7	0.2	275	0.7	0.2	17	0.7	0.3	1149
Female	0.6	0.3	261	0.7	0.2	284	0.6	0.3	270	0.6	0.2	268	0.6	0.1	21	0.6	0.2	1104
Total	0.7	0.3	534	0.7	0.3	578	0.7	0.3	560	0.7	0.2	543	0.6	0.2	38	0.7	0.3	2253

Triglyceride (mg/dL)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			80yr –			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	143.9	101.2	264	136.6	94.1	288	124.2	61.8	281	117.0	62.8	263	124.9	48.3	16	130.4	82.1	1112
Female	84.2	59.0	255	99.9	52.6	273	116.2	73.5	261	116.8	62.4	262	102.6	41.2	20	104.3	63.2	1071
Total	114.6	88.3	519	118.7	78.9	561	120.4	67.7	542	116.9	62.5	525	112.5	45.2	36	117.6	74.6	2183

Total cholesterol (mg/dL)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			80yr –			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	208.3	33.7	273	214.5	34.3	294	206.8	33.9	290	211.6	34.7	275	202.1	33.5	17	210.2	34.2	1149
Female	206.6	32.3	261	226.9	32.2	284	226.4	34.8	270	227.9	32.8	268	212.3	28.9	21	221.9	34.0	1104
Total	207.5	33.0	534	220.6	33.8	578	216.3	35.7	560	219.6	34.7	543	207.7	31.1	38	216.0	34.6	2253

HDL-cholesterol (mg/dL)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			80yr –			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	57.3	14.9	273	58.2	14.8	294	55.7	14.1	290	57.7	15.2	275	53.6	11.8	17	57.2	14.7	1149
Female	70.0	14.8	261	68.7	14.5	284	64.1	14.7	270	64.1	15.6	268	67.0	20.8	21	66.7	15.3	1104

Total	63.5	16.1	534	63.4	15.6	578	59.7	15.0	560	60.9	15.7	543	61.0	18.4	38	61.8	15.7	2253
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Uric acid (mg/dL)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			80yr –			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	6.0	1.2	273	5.9	1.2	294	5.7	1.2	290	5.7	1.5	275	5.8	1.5	17	5.8	1.3	1149
Female	4.1	1.0	261	4.4	1.0	284	4.7	1.1	270	4.7	1.2	268	4.6	1.1	21	4.5	1.1	1104
Total	5.0	1.5	534	5.1	1.3	578	5.2	1.3	560	5.2	1.4	543	5.2	1.4	38	5.1	1.4	2253

Creatinine (mg/dL)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			80yr –			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.9	0.2	273	0.9	0.2	294	1.0	0.8	290	1.0	0.2	275	1.1	0.2	17	1.0	0.4	1149
Female	0.7	0.1	261	0.7	0.2	284	0.8	0.2	270	0.8	0.2	268	0.8	0.2	21	0.7	0.2	1104
Total	0.8	0.2	534	0.8	0.2	578	0.9	0.6	560	0.9	0.2	543	0.9	0.3	38	0.9	0.3	2253

Calcium (mg/dL)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			80yr –			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	9.3	0.3	273	9.3	0.3	294	9.2	0.3	290	9.2	0.3	275	9.2	0.3	17	9.2	0.3	1149
Female	9.1	0.3	261	9.3	0.3	284	9.3	0.3	270	9.3	0.4	268	9.3	0.4	21	9.3	0.3	1104
Total	9.2	0.3	534	9.3	0.3	578	9.2	0.3	560	9.2	0.4	543	9.3	0.3	38	9.3	0.3	2253

Glutamate oxaloacetate transaminase, GOT (IU/L)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			80yr –			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	24.7	10.1	273	25.2	16.1	294	25.9	13.6	290	26.6	9.1	275	26.6	11.0	17	25.6	12.6	1149
Female	20.0	7.3	261	23.5	11.9	284	24.1	8.5	270	25.2	8.8	268	25.0	8.7	21	23.3	9.5	1104
Total	22.4	9.1	534	24.4	14.2	578	25.0	11.4	560	25.9	9.0	543	25.7	9.7	38	24.5	11.2	2253

Glutamate pyruvate transaminase, GPT (IU/L)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			80yr –			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	29.4	19.7	273	27.6	22.2	294	24.7	17.3	290	22.9	13.8	275	22.8	15.2	17	26.1	18.7	1149
Female	17.3	11.2	261	21.7	18.1	284	20.5	14.1	270	18.9	10.0	268	17.4	8.3	21	19.6	13.8	1104
Total	23.5	17.2	534	24.7	20.5	578	22.7	16.0	560	20.9	12.2	543	19.8	12.0	38	22.9	16.8	2253

Phosphorus (mg/dL)

[illegible]

Male	3.2	0.4	273	3.2	0.4	294	3.1	0.5	290	3.1	0.4	275	3.1	0.4	17	3.1	0.4	1149
Female	3.4	0.4	261	3.6	0.4	284	3.6	0.4	270	3.6	0.4	268	3.5	0.4	21	3.6	0.4	1104
Total	3.3	0.4	534	3.4	0.5	578	3.3	0.5	560	3.3	0.5	543	3.3	0.5	38	3.3	0.5	2253

Alkaline phosphatase (IU/L)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			80yr –			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	146.7	35.4	273	149.3	39.6	294	156.3	43.0	290	163.6	57.1	275	165.1	30.5	17	154.1	44.7	1149
Female	116.9	32.5	261	159.6	42.7	284	165.7	42.8	270	177.4	51.1	268	176.6	44.5	21	155.6	48.4	1104
Total	132.1	37.1	534	154.3	41.4	578	160.8	43.1	560	170.4	54.6	543	171.4	38.8	38	154.8	46.5	2253

Gamma-glutamyltransferase (IU/L)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			80yr –			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	54.1	55.4	273	63.6	95.5	294	53.2	65.2	290	42.3	63.2	275	28.5	19.6	17	53.1	71.8	1149
Female	23.3	28.3	261	28.8	25.7	284	28.1	27.3	270	25.1	18.1	268	37.6	67.9	21	26.6	26.7	1104
Total	39.1	46.9	534	46.5	72.5	578	41.1	52.1	560	33.8	47.5	543	33.6	51.7	38	40.1	56.1	2253

Cholinesterase (IU/L)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			80yr –			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	387.7	70.0	273	373.5	89.8	294	355.2	85.9	290	338.3	66.7	275	322.7	70.2	17	363.1	81.0	1149
Female	329.0	85.9	261	376.7	113.8	284	371.5	80.9	270	366.5	90.9	268	334.0	74.3	21	360.9	95.4	1104
Total	359.0	83.4	534	375.0	102.2	578	363.1	83.8	560	352.2	80.7	543	329.0	71.7	38	362.0	88.4	2253

Magnesium (mg/dL)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			80yr –			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	2.3	0.1	273	2.3	0.2	294	2.3	0.2	290	2.3	0.2	275	2.3	0.2	17	2.3	0.2	1149
Female	2.2	0.2	261	2.3	0.1	284	2.3	0.2	270	2.3	0.2	268	2.2	0.2	21	2.3	0.2	1104
Total	2.3	0.2	534	2.3	0.2	578	2.3	0.2	560	2.3	0.2	543	2.3	0.2	38	2.3	0.2	2253

Lipid peroxide (nmol/mL)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			80yr –			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	3.0	0.8	273	3.2	0.8	294	2.9	0.7	290	3.0	0.8	275	2.6	0.7	17	3.0	0.8	1149
Female	2.6	0.6	261	2.7	0.6	283	2.7	1.0	270	2.7	0.7	268	2.6	0.6	21	2.7	0.8	1103
Total	2.8	0.7	534	2.9	0.8	577	2.8	0.9	560	2.9	0.8	543	2.6	0.7	38	2.9	0.8	2252

Iron (micro g/dL)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			80yr –			Total		
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	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	124.2	45.5	273	112.6	42.3	294	117.0	39.5	290	117.2	39.2	275	115.9	36.2	17	117.6	41.7	1149
Female	99.8	47.2	261	104.6	35.8	284	103.6	30.5	270	102.1	33.7	268	89.4	26.1	21	102.3	37.1	1104
Total	112.3	47.9	534	108.6	39.4	578	110.5	36.0	560	109.7	37.3	543	101.2	33.3	38	110.1	40.3	2253

Zinc (micro g/dL)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			80yr –			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	95.2	12.3	273	93.9	13.0	294	93.3	12.8	290	92.4	12.7	275	85.2	12.0	17	93.6	12.7	1149
Female	90.5	12.6	261	93.8	11.9	284	93.2	12.3	270	90.6	13.5	268	84.1	11.1	21	91.9	12.7	1104
Total	92.9	12.7	534	93.8	12.5	578	93.2	12.6	560	91.5	13.1	543	84.6	11.4	38	92.7	12.7	2253

Vitamin A (IU/dL)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			80yr –			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	209.0	44.1	273	218.6	52.0	294	206.2	54.2	290	199.2	50.6	275	184.4	46.9	17	208.0	50.9	1149
Female	150.9	35.7	261	169.6	36.7	283	177.6	38.6	270	177.8	43.3	268	172.7	40.9	21	169.2	40.1	1103
Total	180.6	49.6	534	194.5	51.3	577	192.4	49.4	560	188.6	48.3	543	177.9	43.5	38	189.0	49.8	2252

Free triiodothyronine, Free T3 (pg/mL)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			80yr –			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	3.1	0.4	273	3.1	0.3	294	3.0	0.3	290	2.9	0.3	274	2.9	0.3	17	3.0	0.3	1148
Female	2.9	0.6	261	2.9	0.4	284	2.9	0.3	270	3.0	0.4	268	2.8	0.3	21	2.9	0.4	1104
Total	3.0	0.5	534	3.0	0.4	578	3.0	0.3	560	2.9	0.3	542	2.9	0.3	38	3.0	0.4	2252

Free thyroxine, Free T4 (ng/dL)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			80yr –			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	1.3	0.2	273	1.2	0.2	294	1.2	0.2	290	1.3	0.2	274	1.2	0.1	17	1.3	0.2	1148
Female	1.2	0.3	261	1.2	0.2	284	1.2	0.2	270	1.2	0.2	268	1.2	0.2	21	1.2	0.2	1104
Total	1.3	0.2	534	1.2	0.2	578	1.2	0.2	560	1.3	0.2	542	1.2	0.2	38	1.2	0.2	2252

Thyroid stimulating hormone, TSH (micro IU/mL)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			80yr –			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	1.7	1.0	273	1.9	1.4	294	2.1	1.6	290	2.5	2.8	274	2.4	1.2	17	2.1	1.8	1148
Female	2.1	2.0	261	2.3	2.8	283	2.5	1.7	270	2.4	1.5	268	2.9	2.0	21	2.4	2.1	1103
Total	1.9	1.6	534	2.1	2.2	577	2.3	1.7	560	2.5	2.2	542	2.7	1.7	38	2.2	2.0	2251

Dehydroepiandrosterone sulfate, DHEA-S (ng/mL)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			80yr –			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	2218.9	899.2	273	1881.7	757.0	294	1359.4	683.2	290	1174.4	582.7	274	933.5	514.7	17	1647.1	845.0	1148
Female	1272.0	606.3	261	990.2	551.9	283	780.2	466.9	270	708.0	419.0	268	607.4	388.7	21	929.6	557.9	1103
Total	1756.1	903.5	534	1444.5	799.7	577	1080.1	655.9	560	943.8	559.0	542	753.3	472.5	38	1295.5	803.2	2251

Fasting insulin (micro U/mL)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			80yr –			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	9.0	8.4	261	7.1	4.6	284	7.8	5.8	270	7.2	5.9	246	7.6	5.9	16	7.8	6.3	1077
Female	7.8	4.6	246	7.3	4.7	263	7.8	4.5	250	8.5	5.7	255	8.1	4.7	17	7.9	4.9	1031
Total	8.5	6.8	507	7.2	4.6	547	7.8	5.2	520	7.8	5.8	501	7.9	5.2	33	7.8	5.7	2108

Sialic acid (mg/dL)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			80yr –			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	62.5	7.0	273	63.4	6.8	294	64.5	8.4	290	66.6	8.0	274	69.4	13.1	17	64.3	7.8	1148
Female	61.3	7.5	261	62.5	6.5	283	65.4	7.8	269	67.1	8.1	268	67.5	9.9	21	64.2	7.9	1102
Total	61.9	7.3	534	63.0	6.6	577	64.9	8.1	559	66.9	8.1	542	68.3	11.3	38	64.2	7.9	2250

Fasting glucose (mg/dL)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			80yr –			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	100.3	18.9	264	104.8	20.3	288	107.6	27.7	281	108.7	25.4	263	101.1	22.2	16	105.3	23.5	1112
Female	94.2	14.9	255	99.5	26.1	273	99.6	16.1	261	103.8	24.5	262	101.9	18.3	20	99.4	21.3	1071
Total	97.3	17.4	519	102.2	23.5	561	103.7	23.2	542	106.3	25.1	525	101.6	19.8	36	102.4	22.7	2183

Hemoglobin A1c (%)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			80yr –			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	5.2	0.8	272	5.4	0.7	295	5.5	1.0	290	5.6	0.9	275	5.5	0.9	17	5.4	0.9	1149
Female	5.0	0.5	261	5.3	0.8	282	5.4	0.7	268	5.4	0.8	268	5.5	0.8	21	5.3	0.7	1100
Total	5.1	0.7	533	5.3	0.7	577	5.4	0.8	558	5.5	0.9	543	5.5	0.8	38	5.3	0.8	2249

Albumin (g/dL)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			80yr –			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	4498.4	288.9	273	4456.5	326.8	294	4323.3	302.9	290	4322.6	295.0	275	4163.5	325.6	17	4396.4	315.0	1149
Female	4351.7	326.3	261	4381.9	282.6	284	4326.8	317.8	270	4289.3	286.9	268	4169.5	393.7	21	4334.8	307.6	1104
Total	4426.7	316.1	534	4419.8	307.9	578	4325.0	309.9	560	4306.2	291.2	543	4166.8	360.0	38	4366.2	312.9	2253

2) Serum fatty acid

Dihome-gamma-linolenic acid, DHLA (micro g/mL)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			80yr –			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	34.4	10.7	273	31.3	10.4	294	31.0	9.9	290	29.9	9.6	274	31.2	9.3	17	31.6	10.3	1148
Female	29.4	11.1	261	31.9	10.8	283	35.6	12.1	270	37.7	13.1	268	35.4	13.7	21	33.7	12.2	1103
Total	32.0	11.2	534	31.6	10.6	577	33.2	11.2	560	33.7	12.1	542	33.5	12.0	38	32.6	11.3	2251

Arachidonic acid, AA (micro g/mL)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			80yr –			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	157.9	36.9	273	156.6	36.5	294	143.0	32.2	290	141.8	32.0	274	143.3	28.9	17	149.7	35.1	1148
Female	155.2	35.0	261	159.0	33.9	283	159.3	34.6	270	158.1	39.1	268	146.7	25.2	21	157.7	35.5	1103
Total	156.5	36.0	534	157.8	35.2	577	150.8	34.4	560	149.9	36.6	542	145.2	26.6	38	153.6	35.5	2251

Eicosapentaenoic acid, EPA (micro g/mL)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			80yr –			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	63.6	38.5	273	88.3	45.0	294	80.3	42.3	290	82.5	45.3	274	63.9	33.2	17	78.7	43.7	1148
Female	57.4	30.3	261	74.3	36.4	283	76.8	35.7	270	76.4	37.0	268	76.2	43.3	21	71.4	36.0	1103
Total	60.6	34.8	534	81.4	41.6	577	78.6	39.3	560	79.5	41.5	542	70.7	39.1	38	75.1	40.3	2251

Docosahexaenoic acid, DHA (micro g/mL)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			80yr –			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	138.0	53.8	273	163.7	64.3	294	154.9	50.5	290	155.5	46.8	274	149.6	47.7	17	153.2	55.0	1148
Female	124.6	36.7	261	150.4	38.6	283	160.6	47.7	270	164.8	45.5	268	153.1	46.5	21	150.4	45.0	1103
Total	131.5	46.7	534	157.2	53.6	577	157.7	49.2	560	160.1	46.4	542	151.5	46.4	38	151.8	50.4	2251

3) Complete blood cell count

White blood cell count (/micro L)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			80yr –			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	6055.9	1694.8	270	6095.6	1558.8	293	5808.3	1445.7	289	5833.2	1541.5	274	5658.8	1550.8	17	5944.2	1563.4	1143
Female	5136.2	1334.3	257	4917.3	1360.2	283	5097.4	1282.5	269	5316.9	1385.3	267	5685.0	1822.5	20	5124.2	1358.4	1096
Total	5607.4	1596.0	527	5516.7	1577.6	576	5465.6	1413.7	558	5578.4	1487.7	541	5673.0	1679.9	37	5542.8	1522.6	2239

Red blood cell count (x10000/micro L)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			80yr –			Total		
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	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			80yr –			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	22.8	5.2	270	21.6	5.1	293	20.6	5.5	289	19.7	5.4	274	19.1	7.5	17	21.1	5.5	1143
Female	23.7	6.3	257	22.2	5.6	283	21.7	5.9	269	21.8	5.9	267	21.9	6.3	20	22.3	5.9	1096
Total	23.3	5.8	527	21.9	5.4	576	21.2	5.7	558	20.7	5.7	541	20.6	6.9	37	21.7	5.7	2239

4) Urine analysis

Urine analysis (Semiquantitative urine test tape, Uriace,Termo, Inc.,)

Hemoglobin (/micro L)

		40-49yr		50-59yr		60-69yr		70-79yr		80yr-		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
Negative	Male	257	97.3	275	94.8	260	92.5	242	92.4	13	81.3	1047	94.1
	Female	205	87.6	211	78.7	201	76.7	219	83.3	20	95.2	856	81.7
	Total	462	92.8	486	87.1	461	84.9	461	87.8	33	89.2	1903	88.1
10/μl	Male	4	1.5	10	3.4	15	5.3	17	6.5	2	12.5	48	4.3
	Female	21	9.0	44	16.4	34	13.0	31	11.8	1	4.8	131	12.5
	Total	25	5.0	54	9.7	49	9.0	48	9.1	3	8.1	179	8.3
50/μl	Male	2	0.8	5	1.7	6	2.1	3	1.1	0	0.0	16	1.4
	Female	6	2.6	13	4.9	22	8.4	11	4.2	0	0.0	52	5.0
	Total	8	1.6	18	3.2	28	5.2	14	2.7	0	0.0	68	3.1
250/μl	Male	1	0.4	0	0.0	0	0.0	0	0.0	1	6.3	2	0.2
	Female	2	0.9	0	0.0	5	1.9	2	0.8	0	0.0	9	0.9
	Total	3	0.6	0	0.0	5	0.9	2	0.4	1	2.7	11	0.5

Occult blood (/micro L)

		40-49yr		50-59yr		60-69yr		70-79yr		80yr-		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
Negative	Male	243	92.0	266	91.7	250	89.0	232	88.5	13	81.3	1004	90.2
	Female	209	89.3	223	83.2	226	86.3	209	79.5	17	81.0	884	84.4
	Total	452	90.8	489	87.6	476	87.7	441	84.0	30	81.1	1888	87.4
10/μl	Male	20	7.6	19	6.6	26	9.3	27	10.3	3	18.8	95	8.5
	Female	20	8.5	36	13.4	28	10.7	45	17.1	4	19.0	133	12.7
	Total	40	8.0	55	9.9	54	9.9	72	13.7	7	18.9	228	10.6
50/μl	Male	1	0.4	5	1.7	5	1.8	3	1.1	0	0.0	14	1.3
	Female	3	1.3	7	2.6	6	2.3	8	3.0	0	0.0	24	2.3
	Total	4	0.8	12	2.2	11	2.0	11	2.1	0	0.0	38	1.8
250/μl	Male	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Female	2	0.9	2	0.7	2	0.8	1	0.4	0	0.0	7	0.7
	Total	2	0.4	2	0.4	2	0.4	1	0.2	0	0.0	7	0.3

Ketone body (mg/dL)

		40-49yr		50-59yr		60-69yr		70-79yr		80yr-		Total	
		N	%	N	%	N	%	N	%	N	%	N	%

Negative	Male	260	98.5	287	99.0	281	100.0	257	98.1	16	100.0	1101	98.9
	Female	231	98.7	268	100.0	259	98.9	259	98.5	21	100.0	1038	99.0
	Total	491	98.6	555	99.5	540	99.4	516	98.3	37	100.0	2139	99.0
10mg/dl	Male	4	1.5	3	1.0	0	0.0	5	1.9	0	0.0	12	1.1
	Female	3	1.3	0	0.0	3	1.1	4	1.5	0	0.0	10	1.0
	Total	7	1.4	3	0.5	3	0.6	9	1.7	0	0.0	22	1.0
50mg/dl	Male	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Female	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Total	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
100mg/dl	Male	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Female	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Total	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

Bilirubin (mg/dL)

		40–49yr		50–59yr		60–69yr		70–79yr		80yr–		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
Negative	Male	264	100.0	290	100.0	281	100.0	262	100.0	16	100.0	1113	100.0
	Female	234	100.0	268	100.0	262	100.0	263	100.0	20	95.2	1047	99.9
	Total	498	100.0	558	100.0	543	100.0	525	100.0	36	97.3	2160	100.0
0.5mg/dl	Male	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Female	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Total	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
1mg/dl	Male	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Female	0	0.0	0	0.0	0	0.0	0	0.0	1	4.8	1	0.1
	Total	0	0.0	0	0.0	0	0.0	0	0.0	1	2.7	1	0.0
2.5mg/dl	Male	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Female	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Total	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

Urobilinogen (mg/dL)

		40–49yr		50–59yr		60–69yr		70–79yr		80yr–		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
0.5mg/dl	Male	246	93.2	274	94.5	268	95.4	243	92.7	16	100.0	1047	94.1
	Female	230	98.3	266	99.3	259	98.9	256	97.3	19	90.5	1030	98.3
	Total	476	95.6	540	96.8	527	97.1	499	95.0	35	94.6	2077	96.1
2mg/dl	Male	15	5.7	14	4.8	12	4.3	18	6.9	0	0.0	59	5.3
	Female	4	1.7	2	0.7	1	0.4	7	2.7	2	9.5	16	1.5
	Total	19	3.8	16	2.9	13	2.4	25	4.8	2	5.4	75	3.5
4mg/dl	Male	3	1.1	2	0.7	1	0.4	1	0.4	0	0.0	7	0.6
	Female	0	0.0	0	0.0	2	0.8	0	0.0	0	0.0	2	0.2
	Total	3	0.6	2	0.4	3	0.6	1	0.2	0	0.0	9	0.4
8mg/dl	Male	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Female	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Total	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

Protein (mg/dL)

		40-49yr		50-59yr		60-69yr		70-79yr		80yr-		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
Negative	Male	227	86.0	260	89.7	240	85.4	209	79.8	14	87.5	950	85.4
	Female	215	91.9	244	91.0	228	87.0	226	85.9	17	81.0	930	88.7
	Total	442	88.8	504	90.3	468	86.2	435	82.9	31	83.8	1880	87.0
±	Male	24	9.1	18	6.2	18	6.4	30	11.5	1	6.3	91	8.2
	Female	9	3.8	16	6.0	21	8.0	24	9.1	3	14.3	73	7.0
	Total	33	6.6	34	6.1	39	7.2	54	10.3	4	10.8	164	7.6
30mg/dl	Male	11	4.2	8	2.8	15	5.3	10	3.8	0	0.0	44	4.0
	Female	7	3.0	6	2.2	11	4.2	12	4.6	1	4.8	37	3.5
	Total	18	3.6	14	2.5	26	4.8	22	4.2	1	2.7	81	3.7
100mg/dl	Male	1	0.4	1	0.3	4	1.4	9	3.4	1	6.3	16	1.4
	Female	3	1.3	2	0.7	0	0.0	1	0.4	0	0.0	6	0.6
	Total	4	0.8	3	0.5	4	0.7	10	1.9	1	2.7	22	1.0
250mg/dl	Male	1	0.4	3	1.0	3	1.1	3	1.1	0	0.0	10	0.9
	Female	0	0.0	0	0.0	2	0.8	0	0.0	0	0.0	2	0.2
	Total	1	0.2	3	0.5	5	0.9	3	0.6	0	0.0	12	0.6
1000mg/dl	Male	0	0.0	0	0.0	1	0.4	1	0.4	0	0.0	2	0.2
	Female	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Total	0	0.0	0	0.0	1	0.2	1	0.2	0	0.0	2	0.1

Glucose (mg/dL)

		40-49yr		50-59yr		60-69yr		70-79yr		80yr-		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
Negative	Male	256	97.0	281	96.9	264	94.0	250	95.4	16	100.0	1067	95.9
	Female	232	99.1	260	97.0	260	99.2	256	97.3	21	100.0	1029	98.2
	Total	488	98.0	541	97.0	524	96.5	506	96.4	37	100.0	2096	97.0
±	Male	2	0.8	3	1.0	6	2.1	3	1.1	0	0.0	14	1.3
	Female	1	0.4	2	0.7	0	0.0	1	0.4	0	0.0	4	0.4
	Total	3	0.6	5	0.9	6	1.1	4	0.8	0	0.0	18	0.8
150mg/dl	Male	4	1.5	5	1.7	5	1.8	5	1.9	0	0.0	19	1.7
	Female	0	0.0	4	1.5	1	0.4	3	1.1	0	0.0	8	0.8
	Total	4	0.8	9	1.6	6	1.1	8	1.5	0	0.0	27	1.2
500mg/dl	Male	1	0.4	1	0.3	4	1.4	1	0.4	0	0.0	7	0.6
	Female	1	0.4	0	0.0	1	0.4	1	0.4	0	0.0	3	0.3
	Total	2	0.4	1	0.2	5	0.9	2	0.4	0	0.0	10	0.5
2000mg/dl	Male	1	0.4	0	0.0	2	0.7	3	1.1	0	0.0	6	0.5
	Female	0	0.0	2	0.7	0	0.0	2	0.8	0	0.0	4	0.4
	Total	1	0.2	2	0.4	2	0.4	5	1.0	0	0.0	10	0.5

pH

		40-49yr		50-59yr		60-69yr		70-79yr		80yr-		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
pH5	Male	119	45.1	145	50.0	122	43.4	118	45.0	7	43.8	511	45.9

pH6	Female	122	52.1	114	42.5	121	46.2	104	39.5	6	28.6	467	44.6
	Total	241	48.4	259	46.4	243	44.8	222	42.3	13	35.1	978	45.3
	Male	92	34.8	93	32.1	87	31.0	79	30.2	5	31.3	356	32.0
	Female	65	27.8	81	30.2	73	27.9	94	35.7	6	28.6	319	30.4
pH7	Total	157	31.5	174	31.2	160	29.5	173	33.0	11	29.7	675	31.2
	Male	44	16.7	48	16.6	63	22.4	59	22.5	4	25.0	218	19.6
	Female	40	17.1	68	25.4	55	21.0	52	19.8	8	38.1	223	21.3
pH8	Total	84	16.9	116	20.8	118	21.7	111	21.1	12	32.4	441	20.4
	Male	9	3.4	4	1.4	9	3.2	6	2.3	0	0.0	28	2.5
	Female	7	3.0	5	1.9	12	4.6	13	4.9	1	4.8	38	3.6
pH9	Total	16	3.2	9	1.6	21	3.9	19	3.6	1	2.7	66	3.1
	Male	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Female	0	0.0	0	0.0	1	0.4	0	0.0	0	0.0	1	0.1
Total		0	0.0	0	0.0	1	0.2	0	0.0	0	0.0	1	0.0

Nitrite

		40–49yr		50–59yr		60–69yr		70–79yr		80yr–		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
Negative	Male	264	100.0	290	100.0	280	99.6	261	99.6	16	100.0	1111	99.8
	Female	233	99.6	260	97.0	256	97.7	254	96.6	21	100.0	1024	97.7
	Total	497	99.8	550	98.6	536	98.7	515	98.1	37	100.0	2135	98.8
Positive	Male	0	0.0	0	0.0	1	0.4	1	0.4	0	0.0	2	0.2
	Female	1	0.4	8	3.0	6	2.3	9	3.4	0	0.0	24	2.3
	Total	1	0.2	8	1.4	7	1.3	10	1.9	0	0.0	26	1.2