

**2020 0608 HyperMax MB+I+S+H+C+OS 62yoF**

Marker	2020 0529 HL + RHP		2020 0608 HyperMax Elliptical			2020 0609 HyerMax Elliptical			Reference Range
	13:23	14:50	12:30 Pre	13:04 After	13:35 +30 min	13:20 Pre	13:56 After	15:10 +30 min	
DNA Viruses – Plasma	ND	ND	ND	ND	ND	ND	ND	ND	Not Detected
DNA Parasites – Plasma	ND	ND	ND	ND	ND	ND	ND	ND	Not Detected
DNA Fungi – Plasma	ND	ND	ND	ND	ND	ND	ND	ND	Not Detected
DNA Bacteria – Plasma	4O	3O	9O	1O	1O	ND	ND	ND	Not Detected
WBC	6719	7416	5928	9482	6340	7006	9837	4935	4000 - 11000 Cells/uL
Lymphocyte, Absolute	2368	2522	2459	5357	2308	2463	4386	1074	600 - 5500 Cells/uL
Lymphocyte, Percent	35	34	41	57H	36	35	45	22	10 - 45 %
CD3, Absolute (T cells)	1947	2114	1977	3747H	1887	2069	3285H	924	606 - 3187 /uL
CD3, Percent (T cells)	81.3	82.3H	80.4H	68.1	83.1H	83.0H	74.6	83.9H	61.0 - 80.0 %
CD4, Absolute (T helper cells)	1105	1221	1110	1432	1058	1196	1347	590	365 - 2087 /uL
CD4, Percent (T helper cells)	46.7	48.4	45.1	26.7L	45.8	48.6	31.3L	54.9H	37.0 - 52.0 %
CD8, Absolute (T suppressor cells)	708	730	752	1974H	746	753	1641H	278	154 - 1264 /uL
CD8, Percent (T suppressor cells)	29.9	29.0	30.6	36.9H	32.3H	30.6	37.4H	25.9	15.0 - 32.0 %
CD4/CD8 Ratio	1.6	1.7	1.5	0.7L	1.4	1.6	0.8L	2.1	1.0 - 3.4 Ratio
CD16/56, Absolute (NK cells)	246	237	241	1497H	196	227	839H	87	26 - 497 /uL
CD16/56, Percent (NK cells)	10.2	9.1	9.8	26.5H	8.8	9.0	19.0H	7.7	3.0 - 12.0 %
CD19, Absolute (B cells)	176	182	203	251	162	195	251	86L	89 - 747 /uL
CD19, Percent (B cells)	7.3L	7.0L	8.3L	4.4L	7.3L	7.7L	5.7L	7.6L	9.0 - 19.0 %
WBC	7.6	8.1	7.5	13.3H	7.6	7.8	10.5	8.9	4.0 - 11.0 k/mm3
RBC	5.04	4.77	4.69	5.25	4.66	4.59	4.84	4.40	4.30 - 6.00 m/mm3
Hemoglobin	14.8	14.5	14.2	15.6	14.1	13.6	14.6	13.3	13.0 - 18.0 g/dL
Hematocrit	46.0	43.8	42.9	48.5H	42.8	41.1	44.0	39.8	40.0 - 53.0 %
MCV	91.3	91.8	91.5	92.4	91.8	89.5	90.9	90.5	78.0 - 100.0 fL
MCH	29.4	30.4	30.3	29.7	30.3	29.6	30.2	30.2	27.0 - 34.0 pg
MCHC	32.2	33.1	33.1	32.2	32.9	33.1	33.2	33.4	31.0 - 37.0 g/dL
Platelet Count	179	169	190	242	169	184	211	165	130 - 450 k/mm3
RDW(sd)	40.7	41.5	40.5	42.0	41.3	40.1	41.1	40.9	38.0 - 49.0 fL
RDW(cv)	12.2	12.4	12.3	12.2	12.3	12.3	12.5	12.3	11.0 - 15.0 %
MPV	12.2	11.9	12.6	12.7	12.3	12.3	12.2	12.3	7.5 - 14.0 fL
Segmented Neutrophils	52.4	53.1	54.7	41.5	55.4	54.5	43.7	69.7	%

Lymphocytes	36.1	35.3	34.1	48.6	33.7	33.9	45.0	19.6	%
Monocytes	8.3	8.1	8.1	7.3	7.4	8.0	7.3	7.3	%
Eosinophils	2.5	2.7	2.3	1.8	2.5	2.8	2.8	2.3	%
Basophils	0.4	0.6	0.4	0.5	0.5	0.5	0.8	0.6	%
Absolute Neutrophil	3.99	4.29	4.10	5.53	4.19	4.24	4.62	6.19	1.60 - 9.30 k/uL
Absolute Lymphocyte	2.74	2.86	2.56	6.47H	2.55	2.64	4.74	1.74	0.60 - 5.50 k/uL
Absolute Monocyte	0.63	0.66	0.61	0.97	0.56	0.62	0.77	0.65	0.10 - 1.60 k/uL
Absolute Eosinophil	0.19	0.22	0.17	0.24	0.19	0.22	0.29	0.20	0.00 - 0.70 k/uL
Absolute Basophil	0.03	0.05	0.03	0.07	0.04	0.04	0.08	0.05	0.00 - 0.20 k/uL
Immature Granulocytes	0.3	0.2	0.4	0.3	0.5	0.3	0.4	0.5	%
Abs Imm Granulocytes	0.02	0.02	0.03	0.04	0.04	0.02	0.04	0.04	0.00 - 0.10 k/uL
NRBC RE, Nucleated RBC Perc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 - 1.0 %
Glucose	96	93	96	117H	111H	96	113H	103H	65 - 99 mg/dL
Urea Nitrogen (BUN)	14	12	11	13	12	12	13	13	8 - 25 mg/dL
Creatinine	0.58L	0.58L	0.91	1.05	1.04	0.91	1.05	0.98	0.60 - 1.50 mg/dL
GFR Estimated	98	98	67	57L	57L	67	57L	62	>=60 mL/min/1.73m2
BUN/Creatinine Ratio	24.1	24.1	12.1	12.4	11.5	13.2	12.4	13.3	10.0 - 28.0
Uric Acid	5.5	5.4	7.1H	7.0	7.5H	7.2H	7.4H	7.4H	3.5 - 8.0 mg/dL
Sodium	142	149H	141	145	141	141	142	142	134 - 147 mmol/L
Potassium	4.1	4.5	4.2	4.2	4.5	4.1	4.3	4.0	3.6 - 5.3 mmol/L
Chloride	105	111H	105	104	103	106	104	105	95 - 108 mmol/L
Carbon Dioxide (CO2)	24	21	29	23	26	24	20	22	19 - 31 mmol/L
Anion Gap	14	17	8	19H	12	11	18	14	4 - 18
Osmolality, Calculated	289	303H	286	296H	288	287	290	289	275 - 295 mOsm/kg
Protein, Total	6.6	6.4	7.1	8.0	6.8	6.7	7.3	6.3	6.0 - 8.0 g/dL
Albumin	4.5	4.3	4.5	5.1H	4.6	4.4	4.8	4.0	3.6 - 5.1 g/dL
Globulin	2.1	2.1	2.6	2.9	2.2	2.3	2.5	2.3	1.9 - 3.7 g/dL
Albumin/Globulin Ratio	2.1	2.0	1.7	1.8	2.1	1.9	1.9	1.8	1.0 - 2.5
Cholesterol	194	188	200H	236H	189	190	209H	180	<=199 mg/dL
Triglyceride	139	59	149	215H	151H	160H	182H	124	<=149 mg/dL
Calcium	9.9	9.8	9.9	10.3	10.1	9.6	9.9	9.3	8.7 - 10.4 mg/dL
Phosphorus (Inorganic)	3.2	3.5	3.7	4.0	3.5	3.6	3.8	3.2	2.4 - 4.8 mg/dL
Alkaline Phosphatase	74	67	76	91	74	74	84	67	40 - 140 IU/L
GGT	17	14	18	21	18	17	19	15	5 - 80 IU/L
Alanine Aminotransferase	17	15	16	18	15	16	17	14	5 - 60 IU/L

Aspartate Aminotransferase	23	37	20	22	20	18	22	232	10 - 50 IU/L
Lactate Dehydrogenase	220	463H	233	270H	227	232	267H	0.2	112 - 245 IU/L
Bilirubin, Total	0.4	0.6	0.3	0.4	0.4	0.3	0.3	0.2	0.2 - 1.3 mg/dL
Cholesterol/HDL Ratio	3.7	3.4	3.8	4.2	3.7	3.7	3.7	3.8	<=4.9
HDL Cholesterol	53	55	52	56	51	51	56	48L	>=40 mg/dL
Non-HDL Cholesterol	141H	133H	148H	180H	138H	139H	153H	132H	<=129 mg/dL
LDL Cholesterol, Calculated	113H	121H	118H	137H	108H	107H	117H	107H	<=99 mg/dL
VLDL Cholesterol	28	12	30H	43H	30H	32H	36H	25	<=29 mg/dL
hs-CRP	NA	NA	2.6	3.0	2.5	2.1	2.3	2.0	≤0.9 mg/L
Insulin	NA	NA	NA	NA	NA	NA	NA	NA	2.6-24.9 μU/mL
Albumin	NA	NA	4.6	5.2	4.6	4.4	4.7	4.3	3.5-5.2 g/dL
Erythrocyte Sedimentation Rate	NA	NA	10	9	10	12	11	10	<=15 mm/hr
Estradiol	NA	NA	16.9	19.4	15.8	15.1	16.7	17.9	<5-138 pg/mL
FSH	NA	NA	22.7	25.3	22.6	21.1	22.3	20.2	25.8-134.8 mIU/mL
DHEA-S	NA	NA	76.8	81.8	82.4	72.9	87.1	77.4	18.9-205 μg/dL
LH	NA	NA	13.0	16.4	14.3	13.6	14.8	12.5	7.7-58.5 mIU/mL
SHBG	NA	NA	65.1	76.2	66.5	65.7	68.2	62.2	24.6-122 nmol/L
Cortisol	NA	NA	7.9	26.0	30.9H	9.1	31.3H	23.7H	6.2-19.4 μg/dL
Testosterone, Total	NA	NA	8.7	16.7	22.2	10.9	17.3	16.7	4.6-312.6 ng/dL
Free Testosterone	NA	NA	0.1	0.16	0.25	0.12	0.18	0.2	0.03-2.62 ng/dL
Progesterone	NA	NA	0.240	0.707	1.120	0.527	1.460	0.853	0-0.126 ng/mL
Parathyroid Hormone	NA	NA	74H	112H	88H	86H	127H	80H	15-65 pg/mL
Estriol	NA	NA	<18.0	<18.0	<18.0	<18.0	<18.0	<18.0	≤287.6 pg/mL
Estrone	NA	NA	33.7	39.9	50.7	39.3	38.6	44.6	16.6-184.9 pg/mL
Prolactin	NA	NA	4.62L	17.53	10.34	5.69	25.78H	10.54	4.79-23.30 ng/mL
Dihydrotestosterone	NA	NA	<3.2L	<3.2L	<3.2L	<3.2L	<3.2L	<3.2L	6.5-50.1 ng/dL
Pregnenolone	NA	NA	1.31	0.76	1.16	0.66	3.66	2.31	0.31-3.80ng/mL
Epinephrine	NA	NA	<20	78	<20	29	51	25	<50 pg/mL
Norepinephrine	NA	NA	426	1315	519	456	779	420	112-658 pg/mL
Dopamine	NA	NA	<10	31	<10	<10	38H	<10	<10 pg/mL
Total Catecholamines	NA	NA	426	1424	519	485	868	445	123-671 pg/mL
d-ROMs <a href="https://www.hedsrl.it/eng/oxidative-stress/what-is-d-roms-test/">https://www.hedsrl.it/eng/oxidative-stress/what-is-d-roms-test/</a> Unit of measure: U. Carr	NA	NA	436	301	350	363	401	339	250-300 Optimal 300-320 BL 321-340 Low 341-400 Med

1 U. Carr = 0.08 mg H <sub>2</sub> O <sub>2</sub> /dL									401-500 High > 500 Very high
PAT <a href="https://www.hedsrl.it/eng/oxidative-stress/what-is-the-pat-test/">https://www.hedsrl.it/eng/oxidative-stress/what-is-the-pat-test/</a> Unit of measure: U. Cor 1 U.Cor = 1.4 μMol/L of ascorbic acid	NA	NA	17744	716	2430	2948	2275	2176	<2800 Very high 2200–2800 Nor 2200–2000 BL 2000–1800 Slightly def < 1800 Deficient
OBRI <a href="https://www.hedsrl.it/eng/obri/">https://www.hedsrl.it/eng/obri/</a> Oxidative Balance Risk Index The cardiovascular risk index	NA	NA	0.2	3.8	1.3	1.1	1.6	1.4	0.8-1.2 Normal 1.3-1.7 Borderline 1.8-2.2 High >2.2 Very High
OSI Redox <a href="https://www.hedsrl.it/eng/osi/">https://www.hedsrl.it/eng/osi/</a> Oxidative Stress Index Summary value of oxid stress	NA	NA	561	140	44	56	75	48	<40 Normal 41-65 Borderline 66-120 High >121 Very High

#### Subject background:

- 62 year old female
- Has a history of physical pain issues, is morbidly obese, depressed
- Doesn't believe in exercise

#### Treatment Protocol

- On 2020 0529
  - First blood draw at 13:23, before Hemealumen (HL) and RHP
  - Performed HL (UVBI) + RHP (blood ozone dialysis)
  - Second blood draw at 14:50
- On 2020 0608
  - First blood draw at 12:30
  - Performed 15 min Elliptical exercise + O<sub>2</sub>
  - Second blood draw at 13:04, Pre
  - Third blood draw at 13:35, + 30 min
- On 2020 0609
  - First blood draw at 13:20
  - Performed 15 min Elliptical exercise + O<sub>2</sub>
  - Second blood draw at 13:56, Pre

- Third blood draw at 15:10, + 30 min
- She collapsed during this session due to extreme fatigue, she was exercising at the lowest possible setting

## Results:

- If you compare results at each time point:
  - Bacterium found in plasma, but went from 4 to 3 organisms after HL + RHP.
  - However, after HyperMax O2, organisms went from 9 to 1 to zero in 2 sessions! This indicates that Hypermax Exercise may be better at eliminating certain organisms than therapies performed under the tested parameters. This individual had never done EWOT prior to this data and notice up to 9 organisms were found in her blood and eliminated!
  - No evidence of any organisms after EWOT
  - Hypermax O2 significantly increases WBCs, lymphocytes, NK cells, RBCs, and platelets, even more than UVBI + ozone
- No negative effects of Hypermax on liver or kidney function markers, indicating this is safe
- Notice most hormones were higher immediately HyperMax training, especially: Estradiol, FSH, DHEA-S, LH, SHBG, Cortisol, Total Testosterone, Free Testosterone, Progesterone, PTH, Estrone, Prolactin
- Dramatic improvements in oxidative stress
- Reviewing this data with respect to:
  - Immunity Boosting – data shows increase in immune parameters
  - Disease and Virus fighting/preventative – direct evidence to eliminate bacteria
  - Lung Health – no evidence, cannot measure adequately using Massimo
    - See <https://www.cosmed.com/en/products/cardio-pulmonary-exercise-test/quark-rmr>
    - <https://www.cosmed.com/en/products/pulmonary-function/q-box>
  - Youthfulness qualities – subjective evidence based on subject responses
    - Could be improved if we had questionnaire
    - <https://link.springer.com/article/10.1023/A:1009524612420>
    - <https://www.tandfonline.com/doi/abs/10.1080/15298868.2015.1133452?src=recsys&journalCode=psai20>
    - <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7397859/>
  - Weight Loss – no evidence
    - We have tools to measure
    - This needs to be considered as a 3-6 month project
  - Reduction of Depression and Brain Fog – Not good evidence
  - Joint Pain Relief — Not good evidence
  - Cardiovascular Health – Not good evidence
  - Better overall Fitness – Not good evidence