

## Supplementary Materials

# The Effects of a Multi-Ingredient Performance Supplement on Hormonal Profiles and Body Composition in Male College Athletes

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**Table S1.** MIPS Proprietary Blend.

1709 mg Per Serving <sup>+</sup>	
TRIBULUS EXTRAT (WHOLE PLANT) ( <i>Tribulu terrestris</i> ) (15% protodioscin), FENUGREEK EXTRACT ( <i>Trigonella foenum-graecum</i> ) (4:1 EXT), FLAXSEED POWDER ( <i>Linum usitatissimum</i> ), CHRYSIN, KUDZU EXTRACT (ROOT) ( <i>Pueraria lobata</i> ), RED CLOVER EXTRACT (ARIAL PARTS) ( <i>Trifolium pratense</i> ), ZINC SULFATE MONOHYDRATE, LONGJACK EXTRACT (ROOT) ( <i>Eurycoma longifolia jack</i> ), GLYCINE, L-ARGININE HCL, MAGNESIUM OXIDE, DI INDOLYL METHANE, L-METHIONINE, COPPER GLUCONATE, CORDYCEPS EXTRACT (WHOLE PLANT) ( <i>Cordyceps sinensis</i> ), MIXED PLANT PHYTOSTEROLS, NETTLE EXTRACT (LEAF) ( <i>Urtica dioica</i> ), OAT STRAW EXTRACT (AERIAL PARTS) ( <i>Avena sativa L</i> ), SAW PALMETTO EXTRACT (FRUIT), ( <i>Serenoa repens</i> ), BIOPERIN, NADH	

<sup>+</sup> Subjects took two servings of the MIPS proprietary blend daily.

**Table S2.** Whole Blood Clinical Chemistry Markers.

Variable	Placebo		MIPS		G x T <i>p</i> -Value
	Pre	Post	Pre	Post	
WBC (K/ $\mu$ L)	5.9 $\pm$ 1.2	6.1 $\pm$ 1.0	5.7 $\pm$ 0.7	5.5 $\pm$ 0.5	0.106
RBC (M/ $\mu$ L)	4.6 $\pm$ 0.9	5.0 $\pm$ 0.5	4.9 $\pm$ 0.1	4.8 $\pm$ 0.1	0.245
Hemoglobin (g/dL)	15.5 $\pm$ 1.1	15.7 $\pm$ 1.1	14.6 $\pm$ 0.5	14.7 $\pm$ 0.4	0.639
Hematocrit (%)	45.2 $\pm$ 3.6	45.2 $\pm$ 3.1	43.4 $\pm$ 1.0	43.7 $\pm$ 1.7	0.878
MVC (fL)	91 $\pm$ 5	89 $\pm$ 5	89 $\pm$ 3	90 $\pm$ 4	0.061
MCH (pg)	31.0 $\pm$ 1.4	30.4 $\pm$ 1.7	30.8 $\pm$ 1.2	30.5 $\pm$ 1.2	0.557
MCHC (g/dL)	33.9 $\pm$ 0.7	34.3 $\pm$ 0.9	33.3 $\pm$ 0.9	33.4 $\pm$ 0.9	0.523
Neutrophils (K/ $\mu$ L)	2.9 $\pm$ 1.2	3.5 $\pm$ 1.6	3.2 $\pm$ 0.5	3.0 $\pm$ 0.4	0.078
Lymphocytes (K/ $\mu$ L)	2.3 $\pm$ 0.2	2.1 $\pm$ 0.4	2.0 $\pm$ 0.3	1.9 $\pm$ 0.4	0.617
Monocytes (K/ $\mu$ L)	0.6 $\pm$ 0.1	0.5 $\pm$ 0.1	0.5 $\pm$ 0.1	0.5 $\pm$ 0.1	0.850
Eosmophils (K/ $\mu$ L)	0.2 $\pm$ 0.1	0.2 $\pm$ 0.1	0.2 $\pm$ 0.1	0.2 $\pm$ 0.1	0.777
Basophils (K/ $\mu$ L)	0.1 $\pm$ 0.1	0.1 $\pm$ 0.1	0.1 $\pm$ 0.1	0.1 $\pm$ 0.1	0.584

Values are reported as mean  $\pm$  standard deviation. WBC = white blood cells; RBC = red blood cells; MVC = mean cell volume; MCH = mean cell hemoglobin; MCHC = mean cell hemoglobin concentration.

**Table S3.** Serum Clinical Chemistry Markers.

Variable	Placebo		MIPS		G x T <i>p</i> -Value
	Pre	Post	Pre	Post	
Glucose (mg/dL)	89 $\pm$ 5	89 $\pm$ 5	84 $\pm$ 4	84 $\pm$ 5	0.296
BUN (mg/dL)	19 $\pm$ 4	20 $\pm$ 5	19 $\pm$ 3	20 $\pm$ 4	0.140
Creatinine (mg/dL)	1.1 $\pm$ 0.1	1.1 $\pm$ 0.1	1.04 $\pm$ 0.1	1.04 $\pm$ 0.1	0.528
Total Protein (g/dL)	6.8 $\pm$ 0.2	6.8 $\pm$ 0.2	7.2 $\pm$ 0.7	7.1 $\pm$ 0.6	0.398
Albumin (g/dL)	4.6 $\pm$ 0.2	4.6 $\pm$ 0.3	4.6 $\pm$ 0.38	4.6 $\pm$ 0.2	0.893
Total Bilirubin (mg/dL)	0.4 $\pm$ 0.1	0.3 $\pm$ 0.1	0.6 $\pm$ 0.3	0.5 $\pm$ 0.3	0.999
Sodium (mmol/L)	142 $\pm$ 2	142 $\pm$ 2	140 $\pm$ 2	140 $\pm$ 2	0.999
Potassium (mmol/L)	4.4 $\pm$ 0.2	4.5 $\pm$ 0.4	4.1 $\pm$ 0.1	4.1 $\pm$ 0.2	0.521

Chloride (mmol/L)	102 ± 1	102 ± 1	100 ± 1	101 ± 1	0.838
CO <sub>2</sub> (mmol/L)	24 ± 1	24 ± 2	25 ± 1	25 ± 1	0.697
ALP (IU/L)	88 ± 25	84 ± 24	85 ± 14	83 ± 18	0.094
AST (IU/L)	29 ± 5	30 ± 6	26 ± 3	26 ± 3	0.357
ALT (IU/L)	22 ± 3	22 ± 3	25 ± 4	26 ± 4	0.432

Values are reported as mean ± standard deviation. HDL = high density lipoprotein; LDL = low density lipoprotein; BUN = blood urea nitrogen; CO<sub>2</sub> = carbon dioxide; ALP = Alkaline phosphatase; AST = aspartate aminotransferase; ALT = alanine transaminase.

**Table S4.** Urine Clinical Markers.

Variable	Placebo		MIPS		G x T <i>p</i> -Value
	Pre	Post	Pre	Post	
Glucose	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.999
Ketones	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.999
Occult Blood	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.999
Protein	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.999
Nitrite	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.999
Bilirubin	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.999
Urobilinogen (mg/dL)	0.3 ± 0.2	0.3 ± 0.2	0.3 ± 0.3	0.3 ± 0.2	0.196
pH	6.0 ± 0.4	6.2 ± 0.3	6.2 ± 0.2	6.1 ± 0.2	0.098
Specific Gravity	1.025 ± 0.008	1.027 ± 0.004	1.019 ± 0.007	1.019 ± 0.009	0.484

Values are reported as mean ± standard deviation. Zeros indicate a lack of detectable variable in urine.