

Provide health insights like no other

mescreen™ mitochondrial efficiency test vs. other testing methods

	 mescreen™/MitoScreen	Glutathione	General Biomarkers	Pyruvate ⁴	Lactate	Oxidative Stress Markers ^{1,2,3}	Genetic Testing	Muscle Biopsy
Simple at-home sample collection	✓	✗	✗	✗	✗	✗	✓	✗
Special handling not required	✓	✗	✗	✗	✗	✗	✓	✗
Samples stable for month(s)	✓	✗	✗	✗	✗	✗	✗	✗
Low intra-person variability	✓	✗	✗	✗	✗	✗	✓	✓
Results are not impacted by exercise and fed state	✓	✗	✗	✗	✗	✗	✓	✗
Results indicated current mitochondrial performance	✓	✗	✗	✗	✗	✗	✗	✓
Results indicate dysfunctional mitochondria	✓	✗	✗	✗	✗	✗	✗	✓

1. Mallard AR, Hollekim-Strand SM, Ingul CB, Coombes JS. High day-to-day and diurnal variability of oxidative stress and inflammation biomarkers in people with type 2 diabetes mellitus and healthy individuals. Redox Rep. 2020 Dec;25(1):64–69. doi: 10.1080/13510002.2020.1795587. PMID: 32693740; PMCID: PMC7480454. 2. Li YS, Kawasaki Y, Watanabe S, Ootsuyama Y, Kasai H, Kawai K. Diurnal and day-to-day variation of urinary oxidative stress marker 8-hydroxy-2'-deoxyguanosine. J Clin Biochem Nutr. 2021 Jan;68(1):18–22. doi: 10.3164/jcbn.19-105. Epub 2020 Jul 10. PMID: 33536708; PMCID: PMC7844656. 3. Goldfarb AH, Garten RS, Waller J, Labban JD. Day to Day Variability and Reliability of Blood Oxidative Stress Markers within a Four-Week Period in Healthy Young Men. J Biomark. 2014;2014:248313. doi: 10.1155/2014/248313. Epub 2014 Oct 15. PMID: 26317028; PMCID: PMC4437390. 4. Kollée LA, Willems JL, de Kort AF, Monnens LA, Trijbels JM. Blood sampling technique for lactate and pyruvate estimation in children. Ann Clin Biochem. 1977 Sep;14(5):285–7. doi: 10.1177/000456327701400178. PMID: 921209.

Mitochondrial Function Testing Comparison

	 mescreen™/MitoScreen	Mitome /MitoSwab	Genetic Testing	Muscle Biopsy
Simple at-home sample collection	✓	✓	✓	✗
Stable Sample Type	✓	✗	✗	✗
No Special Handling Required	✓	✗	✓	✗
Results Indicate Current Mitochondrial Performance	✓	✗	✗	✓
Results Indicate Dysfunctional Mitochondria	✓	✗	✗	✓
Measures Oxygen Consumption Rate	✓	✗	✗	✓
Measures Extracellular Acidification	✓	✗	✗	✓
Measures ROS Production	✓	✗	✗	✓
Low Intra-person Variability	✓	✗	✓	✓
Does Not Rely on Partial Measures	✓	✗	✗	✓
Technology Developed for NASA	✓	✗	✗	✗