

TABLE 1. *Substances Utilized or Produced by Normal Young Adult Human Brain*

Substances	Arteriovenous Difference per 100 ml Blood		Metabolic Rates per 100 gm Brain per min.		References
	Range*	Median*	Range*	Median*	
Substances utilized					
Oxygen	+5.9 to +6.9 vol.‰	+6.4 vol.‰	+3.3 to +3.9 ml	+3.5 ml	12, 56, 95, 100, 108, 114, 121, 158, 178, 198
Glucose	+9.0 to +9.9 mg‰	+9.0 mg‰	+4.9 to +6.2 mg	+5.5 mg	56, 95, 158, 178, 198
Glutamic acid		+0.78 mg‰		+0.4 mg	1
Substances produced					
Carbon dioxide	-5.6 to -6.6 vol.‰	-6.3 vol.‰	-3.1 to -3.7 ml	-3.5 ml	12, 56, 108, 121, 178, 198
Glutamine		-1.26 mg‰		-0.6 mg	1
Substances studied with insignificant utilization or production					
Lactic acid	-1.6 to +3.0 mg‰ †	-0.04 mg‰ †			56, 95, 198
Pyruvic acid		+0.11 mg‰ ‡			95
α -Ketoglutarate		+0.04 mg‰ ‡			95
Total ketones		-0.04 mg‰ ‡			95

* Mean values reported by various authors.

† Two of three reported means statistically significant ($p < 0.05$) but of opposite signs.

‡ Not statistically significant from zero ($p > 0.05$).