Table S1. Effects of season, social rank and age on the antioxidant capacity and the oxidative damage of male mandrills.

	Antioxidant capacity N = 49	Oxidative damage N = 48
Season	$F_{1, 47} = 0.53$, P = 0.48	$F_{1, 46} = 9.27$, P = 0.01
Rank	$F_{2, 46} = 0.23$, P = 0.80	$F_{2, 45} = 1.51$, P = 0.27
Age	$F_{1, 47} = 0$, P = 0.98	$F_{1, 46} = 0.31$, P = 0.59
Season×rank	$F_{2, 46} = 0.77$, P = 0.48	$F_{2, 45} = 7.39$, P = 0.01
Rank×age	$F_{2, 46} = 0.59$, P = 0.57	$F_{2, 45} = 0.50$, P = 0.63
Age×season	$F_{2, 46} = 0$, P = 0.98	$F_{2, 45} = 5.90$, P = 0.04

Table S2. Effects of season, social rank and age on the antioxidant capacity and the oxidative damage of female mandrills.

	Antioxidant capacity N = 45-47*	Oxidative damage N = 43-45*
Season	$F_{1, 43} = 9.14$, P = 0.01	$F_{2, 42} = 10.20$, P = 0.008
Rank	$F_{2, 42} = 0.11$, P = 0.89	$F_{2, 40} = 0.10$, P = 0.91
Age	$F_{1, 43} = 1.61$, P = 0.23	$F_{1, 43} = 0.13$, P = 0.72
Season×rank	$F_{2, 42} = 0.58$, P = 0.59	$F_{2, 40} = 0.70$, P = 0.53
Rank×age	$F_{2, 42} = 2.16$, P = 0.17	$F_{2, 40} = 0.98$, P = 0.42
Age×season	$F_{2, 42} = 0.26$, P = 0.63	$F_{2, 40} = 1.13$, P = 0.31

*N varies because two females had unknown rank and were included when the variable rank was removed.