

## The influence of calorie restriction during fasting of the month of ramadhan on free radicals and antioxidants expressed in the form of malondialdehyde and glutation in healthy young males

Kriscahoyo D., author

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=89935&lokasi=lokal>

---

### Abstrak

**Aim:** To observe the effect of calorie restriction on the formation of lipid peroxide (malondialdehyde/MDA) caused by free radicals and antioxidant level (glutathione/GSH) among healthy young males during Ramadan fasting.

**Subjects and Methods:** Prospective self-controlled study was performed on 22 healthy men aged 20-25 years who were presumed to be undergoing the calorie restriction. Subjects were observed four times: day 7 prior to the Ramadan month, the 7<sup>th</sup> and 21<sup>st</sup> days of Ramadan and day 7 after Ramadan. All data are presented as mean averages (SEM); all statistical comparisons were made using Anova Repeated Measures and Pearson's bivariate correlation.

**Results:** Caloric intake decreased by 22 - 25% and MDA decreased significantly ( $p = 0.002$ ), while GSH levels increased significantly ( $p = 0.047$ ). There was no correlation between calorie restriction and MDA levels ( $p = 0.27$ ;  $r = 0.25$ ), but calorie restriction and GSH were correlated ( $p = 0.049$ ;  $r = -0.18$ ).

**Conclusion:** This study showed that calorie restriction during Ramadan fasting decreased MDA and raised plasma GSH levels.