

Energy restriction dieting and weight loss: Comparing Intermittent energy restriction versus continuous energy restriction and intermittent fasting, on benefit and harm, between overweight and normal weight subject, review of evidence

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Statement of the Problem: Obesity pandemic and the lifestyle diseases it carry with connotation, has spurred many into dieting for not just body image conscious but health benefit. Dieting is a form of energy restriction (ER) which has different forms. This does not offer blanket benefit but risk like loss of fat free mass (FFM). A wide array of pattern of dieting is available but which is most suitable and risk free? Not just obese subject has interest but the normal weight subject as well hoping to gain some extra edge on health/beauty benefit.

Methodology and Theoretical Orientation: A Medline search from 1945-2015 using terms “intermittent” or “fasting” or “diet” or “energy restriction” linking with “body fat”, “body weight”, “hepatic fat”, “fat free mass”, “insulin sensitivity”, “insulin resistance”, “metabolic flexibility”. Trials included have at least 50% energy restriction. To compare weight loss and adherence, we include on RCTs where diets had been matched, for total energy intake. Theoretically is by using a commonly used qualitative and quantitative analysis through reviewing literature, clinical history, interview and observation and forming focus group to gather data. Using the security framework and lenses of analysis of the social science/behaviour to understand the fasting trend in our health conscious society.

Finding: Commonest dieting studied were the intermittent energy restriction (IER) which include: including two days consecutive 60-70% energy restriction, (with no or voluntary carry over 20% restriction for next five days cycle, translating into overall 35% per week); alternate day energy restriction of 60-70%(ADER); and alternate day total intermittent fasting (IF). The benefit for the obese subject in terms of weight loss, ability of preserving the weight loss (meaning at least 10% weight loss maintained at 12th month is much depending on level of support given) were comparable between IER and is energetic continuous energy restriction (CER). The compliance with IER is better than CER. The adiposity reduction was readily mobilized from the hepatic and abdominal over subcutaneous and intra-myocellular lipid store by 30% was comparable

between the two. Metabolic inflexibility is seen in all obese subjects. IER and IF does not cause hyperphagia/bing eating during non-restricted day, mood disturbance like depression, perturbation of thalamus-pituitary-gonadal axis, or ability to exercise, and thus is a relatively safe program except for muscle mass. Coming to the optimality of regiment, IER is preferable over IF due to better compliance. Timing of ER does not affect weight loss performance nor compliance. Given one meal a day, or spread that same amount out into 3 smaller meals achieve similar result. Weight loss through ER also helps to reduce general cancer risk especially for the obese.

Conclusion and Significance: This review theme is to compare benefit/risk of IER and CER. IER is preferable for better compliance although both give comparable benefit. To preserve muscle mass, all ER diet must have protein of over 1.2g/kg body weight and exercise simultaneously, especially for normal weight subject.

Recommendation: ER is not the recommended normal lifestyle but invaluable for the obese subject to loss weight, maintain it, compliance with the program in long term and stay healthy. For the normal weight subject it is not recommended to go for energy restricted dieting. Policy maker, NGO and health educator has a duty to inform public on balanced energy living with regular exercise is the best lifestyle to pursue even before been overweight.

Biography

David Ling Sien Ngan, is the member of KL Academy of Social Sciences, has his expertise and passion in improving healthcare delivery and health security of the individual, community and national economic wellbeing, especially through financial planning. He analyses not just as a doctor but through the lens of social scientist from the security perspective as a strategist and policy planner, where much work is done through qualitative analysis via very extensive literature review, augmented by clinical interview and physical assessment. Ageing challenges face more security dimension than just medical and, a constructivist society has a better security provision..

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