

Lecture 2: Polio History and BMR

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This was a study investigating the relationship of predicting metabolic rate, and also looking at the Body Mass Index (BMI) among Polio Survivors.

The primary result was that if a person had a Polio history, BMI was no longer accurate.

Basal metabolic rates (BMR) calculated for Polio subjects were not accurate when measured by indirect calorimetry (due to higher level of fat mass and lower levels of lean mass).

Basal metabolism dropped with age (more than expected) in PPS patients.

Corrective factors have to be taken into account for any estimation of BMR.

French investigations will continue investigating energy prediction equations and diet.

Discussion

Further or conclusive work in this area may be very difficult to provide an effective predictive energy expenditure equation (including corrective factor) for Polio Survivors. It is so hard to know the extent of losses in muscle tissue, or even the level of fat mass within muscles of the body without thorough investigations for each individual. I would be interested in seeing how medical and health professionals could develop guidelines on how to influence energy expenditure and energy intake for Polio Survivors, with recommendations regarding monitoring as more definitive ways to estimate energy expenditure would be very difficult.

If it is needed for more appropriate clinical measurements, such as sleep studies, or even with calculating drug dosage, perhaps there may be a way to record this with direct calorimetry.

It was interesting to note that sleep studies use BMI as a prediction for their prescription. I am not sure if this is standard practice and how this would influence final prescription but it would mean increased potential of incorrect estimations of oxygen consumption from the studies, and the need to alter settings.