Train Smarter; "More" Does Not Guarantee "Better" Outcomes

I believe it is important to know the minimal effective dose (MED). Without establishing and meeting the MED, one may waste a lot of time, energy, and effort without positive gains.

Should the MED always be the goal to strive for?

It depends. It depends on the client's health/wellness needs and/or their fitness needs. It depends on the client's lifestyle and what stressors are already in their life.

For example, if a generally healthy weight-loss type of client has to care for a seriously ill family member (maybe cancer), then it is entirely understandable and responsible for the client to do the MED in exercise, and spend valuable time and resources with their loved one. If an athlete were in a similar situation, I would recommend the MED in exercise.

If a clinically obese client (perhaps in need of surgery, pending weight-loss) were capable of exceeding MED recommendations, but they elected to do just the "minimum", I would advise them to think about why they need the surgery, and why they cannot have the surgery immediately (due to their obesity). I believe reasonably exceeding the MED would be warranted.

Arem et al. (2015) noted that while the 2008 guidelines for MED recommended 150-300 minutes/week of moderate-intensity exercise (or 75-150 minutes/week of vigorous exercise), upper-limits for health/fitness benefits (and limits where too much exercise might be harmful) were not established. Various studies have suggested that prolonged endurance training might be associated with higher risk of arrhythmias or sudden death (Arem et al., 2015). However, such acute incidences were rare as opposed to "the norm", and generally, individuals participating in physical activity (PA) lowered the potential risk of cardiac events (Arem et al., 2015).

Arem et al. (2015) noted that individuals participating in 3 times the MED or minimum leisure time physical activity (LTPA) showed significantly lower mortality rates. Individuals participating in any PA at all (as opposed to sedentary) were able to lower mortality risk (i.e. any PA is better than none) (Arem et al., 2015). For individuals with some PA levels but below the MED, the risk of mortality was lowered by 20% (Arem et al., 2015).

There was a 39% lower mortality risk for individuals participating in 3 to 10 times the minimum recommendations of LTPA (e.g. that 39% applied to individuals doing 3 times the PA recommendations, and individuals doing 10 times the PA) (Arem et al., 2015).

For individuals engaging in 10 or more times the minimum PA recommendations, Arem et al. (2015) observed a 31% lower risk of mortality. This may suggest that more PA does not necessarily guarantee "more reward".

The results of the study by Arem et al. (2015) showed that the current MED seemed to be effective for most of the general population; the longevity benefit threshold seems to be at PA levels 3-5 times the MED; PA levels exceeding 10 times the MED do not seem to increase the risk of mortality (or elicit more harm than good).

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Reichkendler et al. (2014) studied the dose-response of exercise on metabolic health (insulin sensitivity, metabolic risk, quality of life) and found only moderately increased benefits related to 3,800 kcal (high) dose of weekly exercise as compared to the benefits related to 2,000 kcal (moderate) dose of weekly exercise. Reichkendler et al. (2014) found that any small amounts of PA were better than none; consistent moderate amounts of PA was better than a small amount; and high dosages of PA did not guarantee or elicit significantly greater results than moderate amounts of PA.

Aiming for the MED may make sense for a lot of people, and certainly it is better than none.

References

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