

Functional Aerobic Impairment

Overview: Functional aerobic impairment (FAI) assesses the difference between a person's aerobic capacity with that expected based on age gender and usual activity level.

predicted maximum oxygen consumption in mL/kg/min:

(1) sedentary lifestyle (does not exercise at least once per week sufficient to perspire)

• female: $42.3 - (0.356 * (\text{age in years}))$

• male: $57.8 - (0.445 * (\text{age in years}))$

(2) active lifestyle (exercises at least once per week sufficient to perspire)

• female: $42.9 - (0.312 * (\text{age in years}))$

• male: $69.7 - (0.612 * (\text{age in years}))$

percent functional aerobic impairment (% FAI) = $\frac{((\text{predicted maximum oxygen consumption}) - (\text{observed maximum oxygen consumption}))}{(\text{predicted maximum oxygen consumption})} * 100$

Interpretation

| Level of Impairment | Percent FAI |
|---------------------|-------------|
| mild | 27 - 40% |
| moderate | 41 - 54% |
| marked | 55 - 68% |
| extreme | > 68% |

References

Franklin BA Gordon S Timmis GC. Chapter 1: Fundamentals of exercise physiology: Implications for exercise testing and prescription. pages 1-21. IN: Franklin BA Gordon S Timmis GC. Exercise in Modern Medicine. Williams & Wilkins. 1989.

Rimmer JH. Fitness and Rehabilitation Programs for Special Populations. WCB Brown and Benchmark Publishers. 1994. pages 4 - 5.