

Effects of Exercise on Health-Related Outcomes in Those with Cancer

What can exercise do?

- **Prevention of 7 common cancers***

Dose: 2018 Physical Activity Guidelines for Americans: 150-300 min/week moderate or 75-150 min/week vigorous aerobic exercise









- **Survival of 3 common cancers****

Dose: Exact dose of physical activity needed to reduce cancer-specific or all-cause mortality is not yet known; Overall more activity appears to lead to better risk reduction

*bladder, breast, colon, endometrial, esophageal, kidney and stomach cancers

**breast, colon and prostate cancers

Overall, avoid inactivity, and to improve general health, aim to achieve the current physical activity guidelines for health (150 min/week aerobic exercise and 2x/week strength training).

| Outcome | Aerobic Only | Resistance Only | Combination (Aerobic + Resistance) |
|--|---|--|---|
| Strong Evidence | Dose | Dose | Dose |
|  Cancer-related fatigue | 3x/week for 30 min per session of moderate intensity | 2x/week of 2 sets of 12-15 reps for major muscle groups at moderate intensity | 3x/week for 30 min per session of moderate aerobic exercise, plus 2x/week of resistance training 2 sets of 12-15 reps for major muscle groups at moderate intensity |
|  Health-related quality of life | 2-3x/week for 30-60 min per session of moderate to vigorous | 2x/week of 2 sets of 8-15 reps for major muscle groups at a moderate to vigorous intensity | 2-3x/week for 20-30 min per session of moderate aerobic exercise plus 2x/week of resistance training 2 sets of 8-15 reps for major muscle groups at moderate to vigorous intensity |
|  Physical Function | 3x/week for 30-60 min per session of moderate to vigorous | 2-3x/week of 2 sets of 8-12 reps for major muscle groups at moderate to vigorous intensity | 3x/week for 20-40 min per session of moderate to vigorous aerobic exercise, plus 2-3x/week of resistance training 2 sets of 8-12 reps for major muscle group at moderate to vigorous intensity |
|  Anxiety | 3x/week for 30-60 min per session of moderate to vigorous | Insufficient evidence | 2-3x/week for 20-40 min of moderate to vigorous aerobic exercise plus 2x/week of resistance training of 2 sets, 8-12 reps for major muscle groups at moderate to vigorous intensity |
|  Depression | 3x/week for 30-60 min per session of moderate to vigorous | Insufficient evidence | 2-3x/week for 20-40 min of moderate to vigorous aerobic exercise plus 2x/week of resistance training of 2 sets, 8-12 reps for major muscle groups at moderate to vigorous intensity |
|  Lymphedema | Insufficient evidence | 2-3x/week of progressive, supervised, program for major muscle groups does not exacerbate lymphedema | Insufficient evidence |
| Moderate Evidence | | | |
|  Bone health | Insufficient evidence | 2-3x/week of moderate to vigorous resistance training plus high impact training (sufficient to generate ground reaction force of 3-4 time body weight) for at least 12 months | Insufficient evidence |
|  Sleep | 3-4x/week for 30-40 min per session of moderate intensity | Insufficient evidence | Insufficient evidence |

Citation: bit.ly/cancer_exercise_guidelines

Moderate intensity (40%-59% heart rate reserve or VO₂R) to vigorous intensity (60%-89% heart rate reserve or VO₂R) is recommended.

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