

Exercise and Cancer

Cancer is a generic term for a large group of cells developing abnormally beyond their usual boundaries that can then invade adjoining parts of the body and/or spread to other organs. It can be found in almost any part of the body and each require specific management treatment and/or strategies.

Around one third of deaths from cancer are due to the 5 leading behavioral and dietary risk factors: high body mass index, low fruit and vegetable intake, lack of physical activity, tobacco use, and alcohol use.



In Hong Kong



Cancer is the 2nd leading cause of death globally and caused an estimated of 9.6 million deaths in Year 2018. Globally, about 1 in 6 deaths is due to cancer. According to the Hong Kong Cancer Registry, cancer is HK's top killer, contributing to more than 31% deaths of all causes in 2017.

Why Can Exercise Help?



Exercise is proven to be a useful tool to improve physical functioning, quality of life, physical fitness and reduce cancer-related fatigue. Recently research has shown, moderate exercise can improve chemotherapeutic efficacy and decrease tumor development by mediating tumor vasculature remodeling.

Exercise Recommendations

Aerobic Exercise



Stay active on most days of the week is highly recommended.



150-300 mins/week at moderate intensity or 75-150 mins/week at vigorous intensity.



Exercise on a moderate to vigorous intensity.



Any type of rhythmic exercises using large muscle groups.

Resistance Training



At least two to three days per week.



Exercises at a moderate to vigorous intensity with proper progression.



2-3 sets of 8-12 reps of major muscle group exercises.



Progress from single joint to multiple joints exercise.

A combination of aerobic and resistance training leads to the BEST health outcomes

Tips for Getting Started

- Inform your oncologist about your exercise practice and stay alert about what you should avoid from doing.
- Listen to your body and don't push yourself too hard at the beginning. Always starts with light intensity and gradually increase intensity and/or duration.
- Studies show that supervised exercise classes seemed to be more effective than home-based exercise. Consider help from an Exercise Specialist if you are not sure whether you are exercising the right way.

References

- 1) World Health Organization: <https://www.who.int/news-room/fact-sheets/detail/cancer>
- 2) Hong Kong Cancer Registry: <http://www3.ha.org.hk/cancereg/>
- 3) Bedoya, C. A. F., Cardoso, A. C. F., Parker, N., et al. (2019). Exercise during preoperative therapy increases tumor vascularity in pancreatic tumor patients. *Nature Research Scientific reports*, 9(1), 1-8.
- 4) Campbell, K. L., Winters-Stone, K. M., Wiskemann, J., May, A. M., Schwartz, A. L., Courneya, K. S., . . . Gerber, L. H. (2019). Exercise guidelines for cancer survivors: consensus statement from International Multidisciplinary Roundtable. *Medicine & Science in Sports & Exercise*, 51(11), 2375-2390.
- 5) Schadler, K. L., Thomas, N. J., Galie, P. A., Bhang, D. H., Roby, K. C., Addai, P., . . . Chen, C. S. (2016). Tumor vessel normalization after aerobic exercise enhances chemotherapeutic efficacy. *Oncotarget*, 7(40), 65429.

運動與癌症

癌症是細胞不正常增生的疾病，癌細胞會入侵身體周圍的組織，甚至擴散到其他器官。癌症可發生在人體任何部位，不同種類有特定的治療方案，有時需要輔以多種治療方法。不同癌症有特定的治療方法。約三分之一的癌症死亡是由五項行為危險因素所致：身高體重指數(BMI)過高、蔬果攝取量不足、缺乏運動、吸煙和飲酒。



本地情況



癌症是全球第二大死亡主因，2018年估計有960萬人死於癌症，平均每六名死者中就有一人死於癌症。香港癌症資料統計中心資料顯示癌症是香港的頭號殺手，因癌症離世的佔2017年總死亡人數超過31%。

運動怎麼可改善？



運動有助改善身體機能、生活質量、增強體質和減輕癌症相關的疲勞。研究顯示適當的運動可影響腫瘤血管重塑，提高化療功效和減少腫瘤發展。

運動建議

有氧運動



每週運動次數：每天盡量保持活躍。



運動時間：每週150-300分鐘中強度運動或每週75-150分鐘高強度運動。



運動強度：中至高強度。



運動模式：任何使用大肌肉作連續，有節奏的運動。



每週運動次數：每周2-3次。



每次運動時間：每次2-3組，每組8-12次，針對主要肌肉群。



運動強度：中至高強度。



運動模式：從單關節運動開始，循序漸進地加入多關節運動。

開始時注意事項

- 諮詢腫瘤科醫生你的運動計劃，並留意運動時須注意事項。
- 從低強度開始，循序漸進地增加運動強度和持續時間。留意身體反應，切勿逞強。
- 研究表示有專人監督的運動訓練比家居運動更有效，如不確定自己的運動訓練是否正確，請諮詢運動專家的意見。

參考資料

- 1) World Health Organization: <https://www.who.int/news-room/fact-sheets/detail/cancer>
- 2) Hong Kong Cancer Registry: <http://www3.ha.org.hk/cancereg/>
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