



Inflammation is part of the body's natural defence system—essential for healing wounds, fighting infections, and recovering from illness. But when inflammation becomes chronic, it can quietly damage tissues, alter cell function, and create conditions that increase the risk of serious diseases, including cancer.

In recent years, scientists have made significant progress in understanding the link between chronic inflammation and cancer. The connection is more than coincidental: long-term inflammation doesn't just accompany cancer—it often helps cause and sustain it.

炎症是人体自然防御系统的重要组成部分，对于伤口愈合、抵御感染以及从疾病中恢复具有关键作用。然而，当炎症转变为慢性时，它会悄然损害组织、改变细胞功能，并为严重疾病的产生创造条件，包括癌症。

近年来，科学家在揭示慢性炎症与癌症之间联系方面取得了显著进展。这种关联并非偶然：长期炎症不仅伴随癌症的发生，而且常常在癌症的引发和维持过程中有着显著的影响。

The **LINK** Between **INFLAMMATION** and **CANCER**

炎症与癌症之间的关联

How Inflammation Contributes to Cancer

Chronic inflammation can play a role at every stage of cancer development—from initiation to progression and even resistance to treatment. Here's how:

- DNA damage and mutations: Inflammation produces reactive oxygen and nitrogen species, which can damage DNA and cause mutations. These changes can affect genes that normally control cell growth and repair.
- Cell growth and survival: Certain inflammatory chemicals can encourage abnormal cells to grow uncontrollably and avoid natural cell death mechanisms.
- Epigenetic changes: Inflammation can also affect how genes are expressed, further tipping the balance toward cancer development.
- Angiogenesis and tissue invasion: Chronic inflammation supports the formation of new blood vessels (which feed tumours) and helps cancer cells invade nearby tissues.

The Role of Inflammatory Cells in the Tumour Environment

Once cancer takes hold, it often manipulates surrounding immune cells to its advantage. The tumour microenvironment—where cancer cells interact with blood vessels, immune cells, and surrounding tissues—is shaped by inflammation. Immune cells that are normally protective, such as macrophages and neutrophils, can be co-opted by cancer cells to:

- Promote tumour growth and blood vessel formation.
- Suppress the body's anti-cancer immune response.
- Assist in breaking down barriers to help the tumour spread (metastasise).

Instead of fighting cancer, these cells may end up supporting it.

How Inflammation Communicates with Cancer Cells

Researchers have identified key “messengers” that act as go-betweens in the relationship between inflammation and cancer. These substances are part of the immune system's usual response to harm, but when overproduced, they can encourage cancer to grow and spread:

- Some messengers promote survival and rapid division of abnormal cells.
- Others help tumours avoid detection by the immune system.
- Certain proteins support the growth of blood vessels feeding the tumour.
- They are often found at high levels in cancer tissues.

Inflammation's Role in Cancer Treatment

Chronic inflammation not only contributes to cancer development—it can also interfere with treatment. It may reduce the effectiveness of conventional therapies like chemotherapy and radiation by activating survival pathways in cancer cells.

Whether a patient chooses conventional medical treatments or alternative cancer therapies, one thing is clear: managing inflammation is critical. An inflamed internal environment can support tumour growth, weaken the immune response, and make treatments less effective. Addressing inflammation as part of any cancer care plan can enhance results and improve quality of life.

慢性炎症如何促使癌症的发展

慢性炎症在癌症发展的各个阶段都可能起到作用——从癌症的起始到进展，甚至到治疗产生抗性。其主要机制包括以下几个方面：

- DNA损伤与突变：炎症会产生活性氧（ROS）和活性氮（RNS）物质，这些物质能够损伤DNA并导致基因突变。这些变化会影响控制细胞生长和修复的关键基因。
- 细胞生长与存活：某些炎症相关的化学物质会刺激异常细胞的不受控生长，并抑制自然的细胞死亡机制（如凋亡）。
- 表观遗传变化：炎症还会影响基因表达模式，进一步促使癌症的发展。
- 血管生成与组织侵袭：慢性炎症支持新血管的形成（为肿瘤提供养分），并帮助癌细胞侵入周围组织，从而促进肿瘤的生长和转移。

肿瘤微环境中炎症细胞的作用

一旦癌症形成，它通常会通过操纵周围的免疫细胞来促进自身发展。肿瘤微环境（TME）是指癌细胞与血管、免疫细胞以及周围组织相互作用的区域，这一过程受到炎症的显著影响。通常具有保护作用的免疫细胞，如巨噬细胞和中性粒细胞，可能会被癌细胞利用来实现以下目的：

- 促进肿瘤生长和血管生成。
- 抑制机体的抗癌免疫反应。
- 协助破坏屏障以帮助肿瘤扩散（即转移）。

这些细胞最终可能会支持癌症的发展，而非对抗癌症。

炎症如何与癌细胞“交流”

研究人员已经确定了在炎症与癌症之间起关键“信使”作用的分子。这些分子是免疫系统对伤害作出正常反应的一部分，但当过度产生时，它们会促使癌症生长和扩散。具体而言：

- 某些信使分子促进异常细胞的存活和快速分裂。
- 其他信使分子帮助肿瘤躲避免疫系统的检测。
- 某些蛋白质支持为肿瘤供血的血管生成。
- 这些分子在癌症组织中的浓度往往显著升高。

炎症在癌症治疗中的作用

慢性炎症不仅会促进癌症的发展，还会干扰治疗效果。它可能会通过激活癌细胞的生存途径，降低化疗和放疗等传统疗法的效果。

无论患者选择传统医学治疗还是替代疗法，控制炎症都是癌症预防和护理的重要组成部分。炎症的持续存在可能会促进肿瘤生长、削弱免疫反应，并降低治疗效果。将控制炎症作为癌症护理计划的一部分，可以提高治疗效果并改善患者的生活质量。

Prevention and Early Intervention

预防与早期干预

Reducing inflammation isn't only for those already diagnosed with cancer—it also plays a powerful role in prevention. Inflammatory conditions such as obesity, chronic infections, and untreated autoimmune diseases can significantly raise cancer risk. Lifestyle interventions that address these root causes can lower the chance of developing several cancers, including those of the colon, liver, pancreas and breast.

减轻炎症不仅对已确诊癌症的患者至关重要，在疾病的预防阶段同样具有重要意义。肥胖、慢性感染以及未经治疗的自身免疫性疾病等炎症相关状况会显著增加患癌风险。针对这些潜在病因采取生活方式干预措施，例如饮食调整、运动计划及压力管理，可以有效降低结肠癌、肝癌、胰腺癌和乳腺癌等多种癌症的发生几率。

Managing Inflammation: What You Can Do

管理炎症：您可以采取的措施

While some causes of inflammation—like infection or injury—are unavoidable, others can be reduced through lifestyle changes. For individuals living with or at risk of cancer, managing inflammation is a vital part of prevention and care. Here are proven ways to reduce inflammation naturally:

虽然有些炎症诱因（如感染或受伤）不可避免，但其他诱因可以通过生活方式的改变加以减少。对于患有癌症或有患癌风险的人群来说，控制炎症是预防和护理的重要环节。以下是一些已被证实的自然减轻炎症的方法：

Follow an Anti-Inflammatory Diet 遵循抗炎饮食



Focus on whole, plant-based foods, healthy fats (like coconut oil and flaxseed oil), and avoid heavily processed items and red meats. Please refer to “Stop Feeding Inflammation” on page 6 for more details.

多吃天然植物性食物和健康脂肪（如椰子油和亚麻籽油），同时避免食用过度加工食品 and 红肉。更多详情请参阅第6页的《停止喂养炎症》。

Get Enough Rest and Manage Stress 保证充足休息，管理压力



Chronic stress contributes to inflammation. Mindfulness, meditation and quality sleep can help.

长期压力会导致炎症水平升高。正念练习、冥想以及高质量睡眠有助于缓解压力。

Targeted Nutritional & Detox Support 精准营养与排毒支持



There are several supplements that can help reduce inflammation and support immune health. In addition to the list found in the “Supplements to Beat Inflammation” (Turn to page 13), regular administration of the Coffee Enema is also recommended.

有几种补充剂能够有效减轻炎症并支持免疫系统的健康。除了在《抗炎补充剂》（请参阅第13页）中列出的补充剂外，还建议定期进行咖啡灌肠作为辅助疗法。

Exercise Regularly 定期锻炼



Physical activity lowers inflammation marker and supports immune function. Health bounce on the Rebounder 2-5 minutes 6 times daily and take short walks outdoor.

适度的身体活动可以降低炎症标志物水平，并支持免疫功能。例如，每天进行6次、每次2至5分钟的弹跳床运动，并结合户外散步。

Avoid Known Carcinogens 避免已知致癌物



Tobacco, excessive alcohol, and exposure to toxic chemicals increase both inflammation and cancer risk.

烟草、过量饮酒以及接触有毒化学物质会同时增加炎症水平和患癌风险。

Whether you are undergoing cancer treatment, exploring alternatives, or simply aiming to prevent illness, reducing inflammation should be a key part of the plan.

无论您正处于癌症治疗阶段、探索替代疗法，还是以预防疾病为目标，减轻炎症都应成为健康管理计划中的核心组成部分。

Final Thoughts 简而言之

The connection between inflammation and cancer is clear and compelling. Chronic inflammation doesn't just accompany cancer—it helps fuel its growth, support its spread, and interfere with treatment whether conventional or natural. By managing inflammation—through lifestyle, targeted therapies or integrated care approaches—we can better protect our health, reduce cancer risk, and support more effective treatment outcomes.

炎症与癌症之间的关联明确且令人信服。慢性炎症不仅是癌症发病的伴随现象，更在其发展、扩散过程中起到推波助澜的作用，并可能干扰传统治疗或自然疗法的效果。通过综合管理炎症——包括生活方式调整、针对性治疗或整体护理策略——我们能够更好地维护健康，降低癌症发病风险，并支持更为有效的治疗结果。