

The Link Between Diabetes and Colorectal Cancer: Exploring the Evidence

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As colorectal cancer (CRC) rates rise globally, especially in the [early-onset population](#), identifying high-level risk factors for developing this disease becomes ever more critical. The link between diabetes and the incidence of colon and rectal cancers was discovered in 1998 and has been well-established since then, as many trials have uncovered the strength of the association between these two diagnoses.

In 2013, a [meta-analysis](#) of 26 observational studies among more than 200,000 patients assessed the relationship between CRC and all-cause mortality (death due to any cause), cancer-specific mortality, and disease-free survival. Interestingly, diabetes was found associated with poorer outcomes for all three categories. A key finding from this study: individuals who have diabetes and CRC have a 17% increased risk of death due to any cause.

A 2017 [article](#) on the epidemiology of the association between diabetes and CRC delved into the potential molecular mechanisms of this association and the therapeutic implications of treating both diseases, and found that:

- Diabetes mellitus and CRC have many overlapping risk factors
- Hyperinsulinemia, hyperglycemia, and hyperlipidemia may all play a role in the development of these dual diagnoses
- Environmental and genetic risk factors may also play a role
- Promising therapies for treating a dual diagnosis are statins, ACE inhibitors, anti-fibrotic agents, among others

A [study](#) among 2023 individuals evaluated the association between type 2 diabetes risk, cholesterol levels, triglyceride levels, and CRC. Additionally, the study assessed the association

between [Lynch syndrome](#)—which results from a genetic mutation that can lead to CRC—and these other variables, and found that:

- Individuals with Lynch syndrome, type 2 diabetes, and elevated cholesterol levels had an increased risk of CRC
- High triglyceride levels in those with Lynch syndrome did not increase CRC risk
- Hyperinsulinemia and hyperglycemia in diabetic patients may increase the risk of CRC

A more recent [study](#) looked at the clinical and therapeutic implications of diabetes treatment and CRC risk. They found that while not always the case, these drugs often reduced the risk of dual diagnosis. Newer therapies, such as anticancer drugs that target IGF-1R and RAGE receptors (receptors for advanced glycation end products), may also help prevent and treat diabetes-induced CRC.

It will be essential for future research to continue to explore the mechanisms behind these two diseases and to collaborate to create effective treatments for individuals experiencing dual diagnoses.

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