

Parasitic Diseases and Diabetes: Prevalence, Risks, and Clinical Implications

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ABSTRACT

Diabetic individuals are more likely to be susceptible to parasitic infections because they are immunocompromised. According to recent researchers and several studies, gastrointestinal parasites such as *Cryptosporidium parvum*, *Entamoeba histolytica*, *Giardia lamblia*, *Ascaris lumbricoides*, *Blastocystis hominis*, and hookworm are prevalent in diabetic people and cause malnutrition, anemia, and difficulty in the management of diabetes. This article aimed to understand the effect of these parasitic diseases on diabetic people, how to treat these infections, and how to inform diabetics how to protect themselves from these infections.

Keywords: Parasitic diseases, Diabetes, Association, Risk factors

To cite this article: Ismael SS, BH Abdullah, KJ Aziz & NK Shokry. Parasitic Diseases and Diabetes: Prevalence, Risks, and Clinical Implications. Biological Times. 2025. November 4(11): 7.

Introduction

Helminths and intestinal protozoan parasites are the causes of intestinal parasitic infections, and they are found all over the world. Gastrointestinal parasite infections are the most prevalent infections and a major health concern in underdeveloped nations (1, 2). Gastrointestinal parasites can infect all ages and both sexes, but immunocompromised pregnant women and children are more susceptible (3, 4).

Diabetics are at risk of infection, and mainly parasitic infection, because the immune response is suppressed and the susceptibility to infection is increased. Several studies proved that diabetics are more highly infected with intestinal parasitic infections than healthy people and less so with urogenital parasitic infections such as *Schistosoma haematobium* and *Trichomonas vaginalis* (5, 6). Globally, the prevalence of gastrointestinal parasitic infections among diabetics ranges between 24% and 31% and in Africa reaches 39%, while it is less high in healthy people (7, 8). The most prevalent intestinal parasites that infect diabetics are *Entamoeba histolytica*, *Giardia lamblia*, *Cryptosporidium parvum*, hookworms, and *Blastocystis hominis* (9, 10).

Risk Factors and Associated Conditions

Individuals with diabetes are more susceptible to parasite infections, particularly if their glucose levels are poorly managed, if their diabetes compromises their immune system, or if patients also have other medical conditions like anemia or HIV (11, 12). Poor hygiene practices, living in unsanitary places, improper use of latrines, and consuming improperly washed fruits and vegetables all increase this risk. Additionally, a person's risk of contracting an infection rises with the duration of their diabetes and if they reside in a rural region (13).

Clinical Implications

The gastrointestinal parasitic infections in diabetics can cause gastrointestinal disorders, malnutrition, malabsorption, diarrhea, hemorrhage and anemia, and these effects on the body's health and the regulation of blood glucose will be difficult (14,15). To enhance body health and prevent health issues, it is important to regularly screen for these parasites and treat them in diabetics (16,17).

Conclusion

It is clear from this article that the immunocompromised patients (diabetics) are more susceptible to gastrointestinal parasitic infections than the healthy people, and this has an effect on their body condition, which results in non-controlling of blood glucose. This is critical to educate the diabetics on how to protect themselves from parasitic infection by personal hygiene, periodic screening for these parasites, and early medication.

Recommendations

People who live in endemic regions with these parasitic infections or other parasitic infections should take the medical advice about these infections, have periodic examinations for these parasites, take care of their personal hygiene, drink safe water, and eat washed vegetables and fruits.

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