I have IBD, will my child have IBD?
Genetics and IBD

Your child may or may not develop IBD . . .

Having a family history of IBD and having certain genes can predispose a person to developing IBD. The risk is less than 10% if one parent has IBD, and about 20-30% if both parents have IBD\(^1\).

There are factors other than genetics that can affect the risk of developing IBD . . .

The environment is important . . .

The environment can provide triggers that lead to the development of IBD. There is a relatively high prevalence of IBD in Western and developed countries\(^2,3\). However, the incidence of IBD is rising in developing countries. Children who immigrate take on the risk associated with the country to which they are moving\(^4\). Living in an urban setting is associated with an increased risk of developing IBD – this association appears to be stronger for developing Crohn’s disease than ulcerative colitis\(^4\).
Smoking may play a role . . .

Smoking has been reported to be a risk factor for developing and worsening of Crohn’s disease, but a protective factor for developing and for decreasing disease activity in ulcerative colitis\textsuperscript{2,3}. However, it is not recommended to smoke to decrease the risk of developing ulcerative colitis because of the risks associated with smoking (such as lung cancer, cardiovascular disease, and other health problems).

Diet may be important . . .

Although studies vary, diets rich in dietary fiber (fruits and vegetables) are thought to be protective against IBD\textsuperscript{3}. Consuming excessive meat, fish, and fats may increase the risk of developing IBD\textsuperscript{2,3}.

Vitamin D has been found to be low in IBD patients and Vitamin D deficiency may lead to immune deregulation and increase the risk of developing IBD\textsuperscript{5}.

The intestinal microbiome is important . . .

The intestinal microbiome is made of all the bacteria in an individual’s gastrointestinal tract. It is established in infancy and childhood.

The microbiome helps to maintain a healthy immune system by
- opposing certain inflammatory cytokines
- regulating the development of immune cells that recognize foreign- and self-compounds
- activating T regulatory cells, which can promote tolerance to microorganisms\textsuperscript{6}

The intestinal microbiome needs to be balanced for each individual to have a healthy immune system.
Many things affect the intestinal microbiome . . .

The intestinal microbiome can be affected by a person’s genes, their environment (including diet), overall health, infections, and medications (such as antibiotics).

An unbalanced intestinal microbiome can lead to a dysregulated immune response . . .

Multiple factors interact and can lead to a change in the intestinal microbiome. An unbalanced intestinal microbiome can lead to a dysregulated immune response resulting in inflammation characteristic of inflammatory bowel disease.

- the “hygiene hypothesis” proposes that
  - clean environments limit microbial exposure, leading to an altered immune system that is unable to differentiate between beneficial from harmful bacteria
  - the altered immune system can predispose one to exaggerated immune responses, resulting in the chronic inflammation seen in IBD
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If you are concerned about the risks of your future child developing IBD, make an appointment to see your physician . . .

- discuss your concerns with your physician
- change modifiable risk factors
  - stop smoking
  - ensure to follow a healthy diet

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Preconception and Pregnancy in IBD Clinic Information Sheet

References


