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# Are noncommunicable diseases communicable?

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## Summary

The past century has seen a profound decrease in mortality rates across the world, accompanied by a marked shift from communicable diseases (caused by infectious microbes) to noncommunicable diseases (NCDs) such as cardiovascular diseases, cancer, and respiratory diseases. NCDs—defined as diseases that are not transmissible directly from one person to another—account for more than 70% (41 million) of all deaths globally (*1*). The definition of NCDs rules out microbial involvement and instead focuses on genetic, environmental, and lifestyle factors. Data increasingly show that the microbiota is dysbiotic (altered) in individuals with various NCDs. In animal models of NCDs, transplantation of dysbiotic microbiota into healthy animals results in disease, and microbiota composition is shaped by close contact with others. Therefore, we propose that some NCDs could have a microbial component and, if so, might be communicable via the microbiota.



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