

The Human Superorganism

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Noncommunicable diseases and conditions (NCDs) are the 21st century's majority global killers. They are also major human disablers limiting both our function and day-to-day capacities. Despite global efforts to reduce exposure of populations to previously established risk factors such as tobacco smoke and unhealthy diets, we have barely slowed the ongoing epidemic of NCDs. If current safety priorities, lifestyle choices, and medical approaches to NCD prevention and treatment remain unchanged, we are left with the prospects of exhausted financial resources, healthcare systems, and available caregivers on the near horizon. This presentation introduces a new biology of humans into our thinking about NCD inter-relatedness, safety assessment, and disease prevention and treatment. It focuses on the gatekeeper connecting us with our external environment, the microbiome. This presentation considers why the roads toward improved precision medicine, drug efficacy and safety, protection against environmental hazards, and a NCD-reduced future all run through the human microbiome.