inequitable access to vaccines in India, such statements are not very helpful.

Overall, I feel that Dr Kavery Nambisan's book is an interesting read and has several brilliant sections. I wish that it had been described, right at the start, as the self-portrait that it is, and not as a peek into medical practice and the health system in India.

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BOOK REVIEW

Racialising diabetes

COLLEEN FULLER

Arleen Marcia Tuchman. *Diabetes — A History of Race & Disease.* **Yale University Press, 2022, 288 pages, $32.50 (Hardcover) ISBN 9780300228991**

During the Covid-19 pandemic, debates have emerged about whether, and if so why, people of colour are more susceptible to the virus. In Canada, for example, racialised and indigenous populations have a significantly higher risk of severe Covid-19 infection and mortality [1]. This has prompted several studies to determine whether this is due to socioeconomic factors or if the genetic makeup of racialised groups places them at greater risk. As David Naylor, co-chair of Canada's Immunity Task Force, puts it, what proportion of the higher Covid rates in Toronto's black communities was linked to socioeconomic conditions — "and how much could be genetic?" [2]. This is the question that Arleen Tuchman seeks to address in this brilliant and thoughtful book. She exposes the "fraught relationship" (p xvii) between race and the wide health disparities between people from different racial, ethnic and class backgrounds, and provides a close look at the economic, social, cultural and political context which shapes how we understand diabetes and those who have the disease.

Tuchman begins by asking how experts have typically explained the higher rates of diabetes among Indigenous, Black and Hispanic Americans as compared to Whites. She finds that "among the many risk factors, which include age, gender, and economic status, none has figured as prominently in explanations of observed health disparities as race" (p xvii). That focus has diverted efforts and resources away from eliminating health inequities rooted in class differences and racism, while supporting a powerful narrative that those who have diabetes are themselves to blame.

The first four chapters of the book explore how the characterisation of diabetes — including what it is, who it affects, and how it progresses — has been influenced by class and racial bias from the late 19th century to the mid-1980s. Tuchman begins her story in 1870, when diabetes emerged in the European literature as a "Jewish malady", an assertion that travelled comfortably across the Atlantic to the United States. By the turn of the century, the idea gained traction in parallel with the increase in immigration to the US from around the world and rising xenophobia and anti-Semitism. There were those who argued that increased migration of Jews, especially from Eastern Europe, would increase the overall incidence of diabetes — a premise that helped fuel support for curtailing immigration. But if diabetes rates were, in fact, higher among Jews than non-Jews — an assertion that rested on rather patchy evidence — very few looked for explanations beyond a highly biased stereotype of Jews as a biologically distinct "race", subject to extreme anxiety.

Assumptions about race were shifting opportunistically during this period, but the aetiology of diabetes itself was a work in progress and the stereotype of anxious Jews fit nicely with the prevailing theory that diabetes was a disease of the nervous system. Throughout the book, Tuchman explores this interplay between racial and class bias, on the

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one hand, and the scientific and medical understanding — and often confusion — about diabetes, on the other hand.

Beginning in the 1930s, diabetes went from being a "Jewish malady" to a "clean" disease affecting whites, in particular the middle and upper-middle classes. This corresponded with the emerging view that diabetes was a disease of prosperous and civilised societies and of the "good" and "bad" diabetic — those who were "good" managed their disease well, practising self-restraint and discipline, and those who were "bad" were overweight and unable to keep dreaded complications at bay because of their lack of intelligence, gluttony and poor habits. No other individual influenced these harsh views more than Dr Elliot Joslin, the first US doctor to specialise in diabetes, who believed that "to get fat shows a lack of moral character" (p 41). In this scenario, the good diabetic was an ideal American citizen who successfully managed a complex condition and was courageous, restrained and overwhelmingly white and upper-middle class. Joslin, an early advocate of diabetes self-management, founded the Joslin Diabetes Center in 1898. His influence was far-reaching, including during and before the discovery of insulin in 1921, when starvation diets were promoted as the best therapy for diabetes patients.

Racist stereotypes, along with public surveys focusing on the "average (white) American", rendered African Americans and Indigenous people invisible in assessments of both diabetes risk and incidence. Until the 1960s, it was generally believed that both groups were immune to diabetes — blacks because they had a less developed nervous system and were slow-moving, "carefree" rural people; Native Americans because they were primitive and untouched by modern civilisation. But as southern migration increasingly brought black people into urban settings during the 1960s and 1970s, studies began to point to rapidly increasing rates of diabetes, especially among African American women. Experts rushed to explain that, as living standards among black Americans rose, so too did their risk of diabetes, a disease which now was linked, not to an ideal citizenry, but to "overindulgence in food".

What was also on the rise, however, were questions about the links among race, poverty and disease. These issues were being raised by civil rights activists, at the same time, much of the scientific research was beginning to focus on identifying a genetic basis for diabetes, an endeavour that was described as a "nightmare" prior to the 1980s. Against this backdrop, the image of who was most at risk for diabetes shifted from middle class to poor, from white to "nonwhite" and, importantly, was increasingly female, particularly among African Americans. Despite the visible parallel rise of poverty and diabetes among people of colour, it was heredity and obesity that received credit. There was just "something about 'nonwhites' that made them more susceptible to developing diabetes" (p 158) as well as less capable of successfully and responsibly managing the disease. This narrative became the dominant theme, overshadowing the role that poverty and racism played in the increasing rates of diabetes among African Americans.

The chapter on the experience of Native Americans provides a powerful description of the long-term consequences of genocide, land theft, impoverishment and specifically anti-Indigenous racism on the health of a group who, despite their diversity, were categorised as a single "race" and culture. Beginning in 1962, the "thrifty gene" hypothesis emerged to explain the rising rate of Type 2 diabetes among Indigenous people in North America and, in fact, around the world. The theory suggested that prior to European colonisation, the populations of the Americas, who were presumed to be frozen in a more primitive stage of evolution, possessed a "thrifty genotype" which helped them adapt to periods of food scarcity. But when Europeans arrived, "primitive peoples [were] being projected in a few generations from a Stone Age to an Atomic Age culture" (p 132). They simply were unable to biologically adapt to modern civilisation and were, thereby, susceptible to obesity and diabetes. Tuchman contrasts the enduring prominence of the thrifty gene hypothesis to the link many Indigenous activists have made between environment — including colonisation — and diabetes. Yet, even today, this controversial and racist theory continues to influence clinical practice [3] and perspectives on disease among indigenous populations [4].

Tuchman argues that what has been and continues to be hidden in plain sight is that the racist theories about biology have diverted intellectual and material resources away from strategies that could effectively address health disparities between the poor — who are disproportionately Indigenous, African American and Hispanic — and those who are higher up the socioeconomic ladder. Diabetes is better understood today than during the period covered in Tuchman's book, but as she concludes, many of these racial stereotypes have survived and continue to shape our perceptions of who is more susceptible to diabetes and its complications and why.

In the 1970s, diabetics were streamed into two groups: juvenile and adult onset. By the 1990s, these were designated as Type 1 and Type 2 diabetes. But the face of Type 2 diabetes continues to be highly racialised. Diabetes Canada, for example, describes "ethnicity" as an independent risk factor for diabetes, pointing to South Asians who are 3.4 times more likely to develop the condition than "Caucasians" [5]. The association suggests that the populations who are disproportionately increasing the country's burden of diabetes at such alarming rates are migrants whose presence has doubled over the last decade and now represent a fifth of the population.

Tuchman notes that studies on diabetes in "nonwhites" focused "almost exclusively" on those with Type 2, while those who were self-reliant and intelligent — the "ideal citizen" of the 1950s — were mainly people with Type 1

diabetes who were, presumably, young, white and innocent. These destructive stereotypes also have influenced views across the population of people with diabetes themselves. Websites abound where Type 1 diabetics express frustration that their minority status causes people to assume they have Type 2 diabetes and are therefore "at fault".

The same stereotypes apply internationally. Tuchman's book traces how racism has influenced both the incidence of poverty and the distribution of diabetes among communities of colour. While her focus is on the United States, her analysis is relevant to discussions about how the disease is distributed internationally as well. An estimated 80% of Type 2 diabetes occurs in low- and middle-income countries [6], while a majority of those with Type 1 diabetes live in higher-income countries, most of which are in the northern hemisphere [7]. Tuchman does not argue that race should be abandoned as an analytical category, but rather that poverty and racism are factors which increase one's chance of developing diabetes. This argument is as true in one country as it is on the global stage.

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