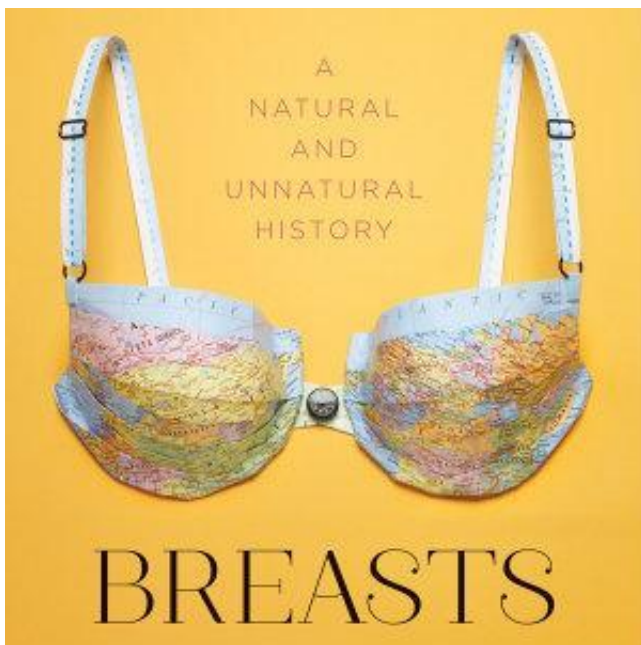


Breasts: A Natural and Unnatural History

ROZ BELLAMY

A revealing look at the way that changes in our environments, diets and lifestyles have altered our bodies, our health and the health of future generations.



Florence Williams, a science journalist from Boulder, Colorado, started writing about breasts as she breastfed her second child, disturbed by information she read about toxic chemicals present in human breast milk. *Breasts: A Natural and Unnatural History* is the product of her meetings with scientists, toxicologists, anthropologists, plastic surgeons and people affected by breast-related issues or illnesses, combined with her extensive reading and analysis of statistics. At times the book reads as a long, engaging literature review, as there is so much information and research densely packed into each chapter.

Williams is clear from the beginning that it isn't just mothers who should be concerned about breasts. At the start of her book, she explores social and scientific understandings of breasts, including disagreements between anthropologists over whether breasts evolved through sexual selection or natural selection. She presents both sides, from the 'male gaze' theories to feminist anthropologists' perspectives, which are relatively new to the debate. She provides a detailed history of mammals and

lactation, and explains the biology and functions of human breasts. She is rueful about the lack of research into breasts and illuminates several areas which need a great deal more investigation and learning.

The chapter on breast augmentation – Fill Her Up – is disturbing, although Williams is fair with the material she presents. It would read well even as an essay on its own, providing an intriguing summary of the history and risks, as well as physical descriptions of the surgery itself. Most interesting and familiar is the lack of regulation (until the 1990s) and warnings to patients, and the fact that women continued to have the surgery despite no research into the long term effects of introducing unfamiliar products into the body. It links well with her next chapters on the chemicals and plastics that our bodies absorb; it becomes obvious that humans haven't become more shrewd or careful as we continue to use products that aren't tested, or even those that we know are harmful.

The central theme of Williams' book, in her own words, is that 'organisms like us are designed to be biologically responsive to the world around us'. Her research into the environmental factors impacting on breasts, specifically the chemicals we absorb on a daily basis, is the most alarming part of the book. Williams looks at what is in our food, water and the products we use on our hair and body. In one chapter she and her daughter participate in an experiment in which they first 'tox' by using plastics, canned foods and beverages and supermarket body products, and then 'detox' by avoiding exposure to all chemicals. She becomes aware of how many products contain BPA (used in the lining of some food and beverage packaging to protect food from contamination and extend shelf life), phthalates (oil-based organic compounds added to products during manufacturing to act as a lubricant or softener) and a long list of worrying acronyms. Even when she detoxes and cuts out every possible contaminant – including fake leather, mainstream toothpaste and deodorant, credit card receipt paper and plastic kitchen wrap – her levels don't reach zero, and she realises that these chemicals are present in water and food.

One of Williams' motivations for researching how breasts are affected by certain chemicals, apart from learning about what is present in breast milk, is to understand why puberty is starting earlier and girls are developing breasts sooner than ever before. This is a particular concern of hers, as early breast development is a risk factor for breast cancer. Williams writes about how the chemicals in question have molecules that imitate oestrogen, which impacts on breast development, and about why puberty is the worst time to be exposed to anything carcinogenic. Explaining that chemicals in products are still not regulated or often even labelled, she says 'In the United States, every chemical is assumed safe until proven guilty'.

Williams writes thoughtfully and gently about cancer, and doesn't seem out to frighten the reader as much as educate. She covers all of the risk factors, myths and fears concerning breast cancer, how women can check their breasts, and what they should know before they breastfeed. She also shares cases of men with breast cancer, in a chapter focusing on a US Marine Corps base which has the largest known cluster of male breast cancer incidents, because of its contaminated water.

Using her background in science journalism combined with an interest in anthropology and a conversational tone throughout, Williams ensures that her readers can follow all of her findings, even in the more clinical or scientific sections of the book. Sometimes her colloquialisms and overly detailed physical descriptions of the people she interviews feel out of place, but she succeeds in keeping the tone light and the subject matter interesting. She makes the book personal and intimate by confiding her family history and experiences, and also through becoming a guinea pig in experiments and at a breast augmentation consultation where she is told how her breasts could be improved as a size C.

We live in a society that sexualises breasts and values their appearance over their vital functions. Williams stresses that breasts can teach us so much about our health and the way we live, if we only took the time to find out what is inside them.

Rating: 4 stars out of 5

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By Florence Williams

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Roz Bellamy is a Melbourne-based writer, reviewer and editor, with a passion for the arts and travel.