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HACKING THE MOMMY BRAIN

SUPERPOWERS OF PREGNANT WOMEN

Directed by Marie Thiry

Produced by Pernel Media & ARTE France

52'

SYNOPSIS

Far from the myth of “baby brain,” pregnancy triggers one of the most remarkable neurological transformations known to science: rewiring the mind to heighten empathy, perception, and emotional intelligence. Hacking the Mommy Brain reveals how these hidden superpowers enable mothers to meet the challenges of caring, connecting, and creating life.

In cutting-edge laboratories from Madrid to Amsterdam and Harvard, neuroscientists are rewriting everything we thought we knew about the so-called “Mommy Brain.” For decades, women described a mental fog or loss of concentration during pregnancy. But new research has turned this cliché on its head, revealing that the maternal brain undergoes a complete neurological remodeling, a process as profound as adolescence.

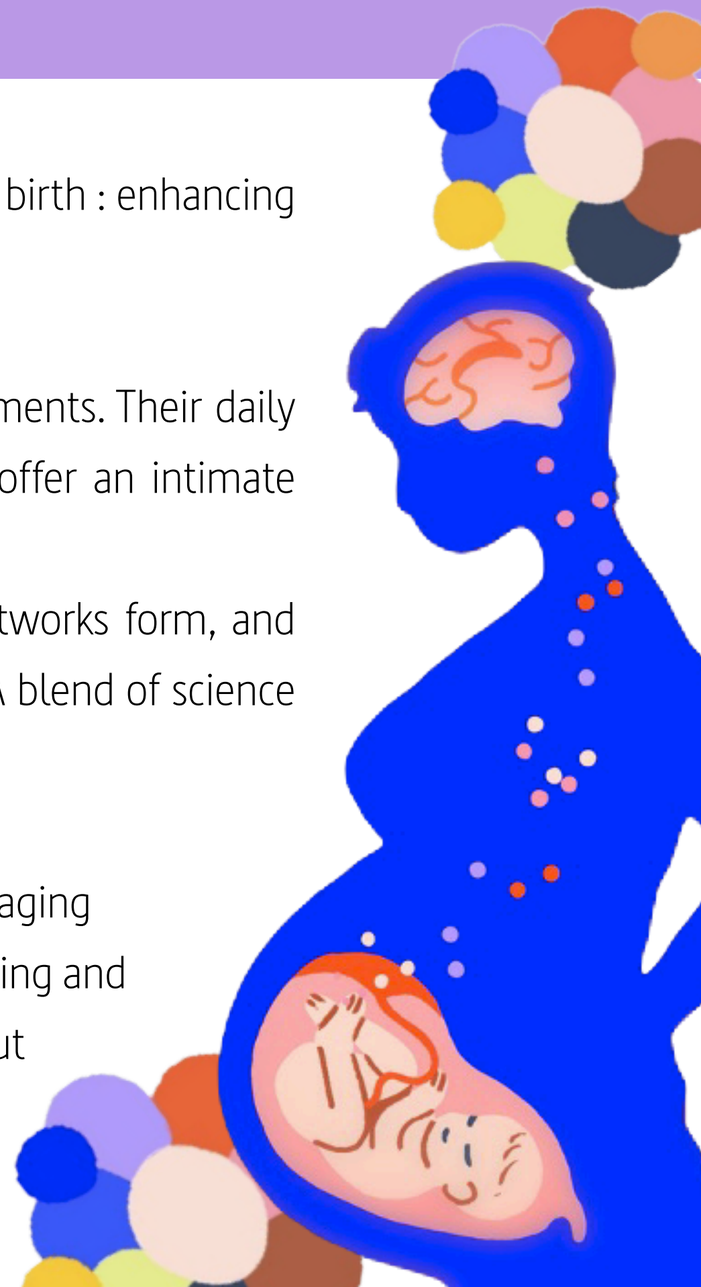
Through exclusive access to these revolutionary studies and the intimate testimonies of women participating in them, Hacking the Mommy Brain explores how pregnancy reshapes cognition, emotion, and identity itself. This vibrant and accessible documentary blends science, storytelling, and artistry to uncover how the pregnant brain adapts to new roles, transforming vulnerability into strength. Far from a decline, it is an evolution — one that connects biology and emotion, reason and intuition, in a dance as old as humanity.

ABOUT THE FILM

Six groundbreaking studies reveal, step by step, how the brain evolves throughout pregnancy and after birth : enhancing empathy, stress regulation, sensory awareness, and the ability to bond with a newborn.

The film interweaves these discoveries with the personal stories of women taking part in the experiments. Their daily voice notes, transformed into colorful, humorous 2D animations inspired by comic book heroines, offer an intimate counterpoint to the lab scenes.
Through these sequences, we travel inside the “control center” of the brain, watch new neural networks form, and witness the invisible metamorphosis that makes motherhood one of nature’s greatest rewiring feats. A blend of science and emotion, rigor and poetry, the film offers a bold new lens on the power of the maternal mind.

The film’s visual identity is colorful, dynamic, and pop-inspired, designed to make complex science engaging and relatable. By fusing real science, humor, and heartfelt storytelling, the documentary offers an uplifting and eye-opening perspective on motherhood — a story where women are not diminished by pregnancy, but transformed into something extraordinary.



SCIENTIFIC APPROACH

Behind its playful tone, Hacking the Mommy Brain is grounded in rigorous neuroscience. The film follows six pioneering research programs conducted across Europe, the United States, and Israel. Using magnetic resonance imaging (MRI), electroencephalography (EEG), blood analyses, hormonal tracking, and behavioral testing, scientists observe how pregnancy reshapes both the structure and function of the maternal brain.

Women are scanned and studied at key milestones — during pregnancy, three months after birth, and again one year later — providing an unprecedented longitudinal view of this metamorphosis. These protocols reveal not only structural changes, such as shifts in grey and white matter, but also the neural activation patterns that underpin empathy, stress regulation, and bonding. By bringing cameras into these labs, the documentary translates complex data into human stories, showing science as both method and emotion, a quest to understand how the mind adapts to create life



DIRECTOR'S NOTE — MARIE THIRY



When I became pregnant for the first time, I experienced what so many women describe a mixture of wonder, exhaustion, and deep transformation. As a science enthusiast, I was stunned to discover how little research existed on what happens inside the brain during this period. This revelation became the spark for Hacking the Mommy Brain.

Through the work of visionary female neuroscientists — Susana Carmona, Elseline Hoekzema, Catherine Dulac and others — we now know that pregnancy reshapes the brain in ways that enhance emotional intelligence and adaptability.

My ambition is to share this revolution in understanding with a wide audience and to help shift the narrative about motherhood. What if, instead of seeing new mothers as fragile or forgetful, we recognized them as undergoing a powerful mental upgrade, one that gives them new capacities for care, intuition, and creativity? This film is both a celebration of science and an ode to women's resilience.



→ Animated sequences humorously visualize the hidden “superpowers” of the maternal brain (empathy, pereception, memory, motivation…) translating complex brain science into images that connect knowledge with feeling.

THE CONTRIBUTORS



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