A new air filter has been developed that is designed to create a barrier of clean air directly in front of a child’s face.

Scientific studies have shown that those most at risk from air pollution are those least able to do anything about it – young children. Because children’s immune systems are not fully developed until they are around four or five years old, and they spend more time outside, and close to the ground where pollution is at its most harmful, they end up inhaling more pollutants per pound of bodyweight than adults. This is particularly true of particulates, which then lodge in the deepest parts of their developing lungs. It is no wonder that, according to a recent report by UNICEF, more than 600,000 child deaths worldwide each year can be directly attributed to air pollution. We have already seen air filters designed to be worn around the neck and which looks like a scarf, now an air filter has been designed expressly for infants.

Cameraman Yosi Romano was pushing his daughter’s stroller through the congested streets of London one day when he noticed that the stroller put his daughter’s face at the same level as the exhaust coming from the cars and trucks on the road. He returned home and began researching pollution with the help of his brother, Jacob, a biochemistry student in Cambridge. What they learned led Romano, in conjunction with design consultancy Map Project Office, to develop the Brizi Baby, an air purification system for strollers. The device works as a pillow, and contains specially-designed sensors which detect harmful gases and particulates in the air. Once high levels of pollution are detected, a fan begins drawing air in through filters in the pillow. The cleaned air is then gently ejected into the child’s breathing space in the form of a purified cloud. As no breeze is created,
the child remains undisturbed. The Brizi can deliver 1.5 liters of filtered air every ten seconds, resulting in a continuous barrier of clean air in front of the child.

While it filters the air, the Brizi also collects data about air quality, which can be downloaded to a smartphone app. The app then updates users in real time with information about which local streets and surrounding areas are most polluted, so they can be avoided. The Brizi Baby is currently available on Kickstarter, and the app will be free for personal use. We have already seen a design concept for a canary toy tracking air quality, could this invention inspire a new range of products to protect children from the harmful effects of pollution?

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