

## How do we validate actual effectiveness of placebos

To help validate the “actual” effectiveness of medicine or supplements, the US government established the Food and Drug Administration (FDA). The FDA is responsible for protecting and promoting public health through the regulation and supervision of food safety, dietary supplements, prescription and over-the-counter pharmaceutical drugs (medications), vaccines, biopharmaceuticals, blood transfusions, medical devices, electromagnetic radiation emitting devices (ERED), cosmetics, animal foods and feed and veterinary products. This oversight is not without critics who argue that the FDA’s regulatory power and testing causes the approval of drugs to take too long. They argue that because of the slow process for approval, that relief of human suffering and potential disease benefits from drugs are being unnecessarily delayed. However, in 2011, Zuckerman and Brown published a report that showed that most of the medical devices recalled in the last five years for “serious health problems or death” had been previously approved by the FDA. In addition, the FDA approved Vioxx in 1999 which has now been estimated to have contributed to fatal heart attacks in thousands of Americans. Vioxx has been withdrawn from the market. If the oversight of the FDA still produces products that are harmful for humans, what about products that contain the disclaimer, “these statements have not been approved by the FDA”, are they safe? Are they effective? Knowing what you now know about placebos, how difficult is it to prove the actual effectiveness of a particular medicine or supplement. If people believe it works is it necessary to prove that it actually works? Perhaps the most famous placebo is vitamin C and its effect on the common cold. This myth was first propagated by the Nobel Prize winning scientist Linus Pauling. Pauling won the Nobel Prize for his work on Quantum Chemistry and Molecular Biology. Pauling was awarded the Nobel Prize in Chemistry and the Nobel Peace Prize, making him the only person to be awarded two unshared Nobel Prizes. Perhaps this is why his book entitled: Vitamin C and the Common Cold, which he published in 1970 received immediate acceptance from the general population but not the mainstream scientific community. It would appear that expectation and personal belief (Nobel Prize winner) being the key ingredients to the effectiveness of the placebo effect has made vitamin C is one of the most widely used supplements for treatment of the common cold, even though countless scientific studies have shown that it has no benefit in curing a cold.



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