



## **Health Newsfeed**

### **MARS/VENUS VACCINE RESPONSES**

#### **ADD DIFFERENCES IN RESPONSES TO VACCINES TO THE LONG LIST OF DIFFERENCES BETWEEN MALES AND FEMALES**

More women than men complain of negative side effects of vaccination and may therefore avoid it in the future. Now a Johns Hopkins literature review led by Dr. Sabra Klein has concluded that sex is an often overlooked aspect of vaccine response that could have practical implications, such as explaining this antipathy.

“What we find is that across very diverse vaccines, women mount significantly higher immune responses against vaccines, which is very beneficial when we think about efficacy of vaccines and protection. The downside of these heightened immune responses is that we also experience significantly more frequent and more severe adverse reactions, including fever, pain and inflammation at the site of vaccination.”

Klein says that a better understanding of female physiology throughout the lifespan would also help predict immune responses, such as during pregnancy or after menopause.