

## Vaccines and the Cancer Vaccine

### **Abstract**

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### **Use and Process**

-Threw the use of vaccines the human body is aided in the development of an improved immune system to defend against specific naturally occurring diseases. This process begins when a human is administered a predetermined amount of a particular agent. This agent resembles the microorganism that is attempting to be prevented.

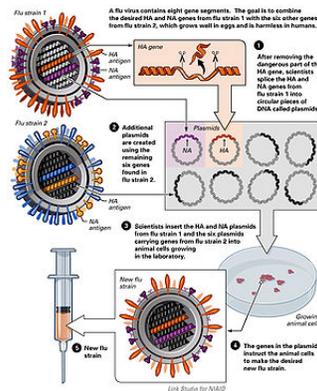
### **Bodies Reaction**

The bodies reaction to the vaccine occurs in three steps. First the body begins by recognizing the foreign agent as a threat to the body and its health. The bodies immune system then attempts to eliminate all of the pathogen before it has a chance to enter the cells. The body will also go as far as to detect and eliminate any cells with a trace of the agent to prevent the rapid multiplication/ distribution threw out the body. With the amount of microorganism implanted the body's immune system can quickly and effectively rid the entire person of the disease all together. The third step taken by the body is to remember the specific agent so that it will be fully prepared to deal with another encounter in the future.

### **Effectiveness**

-The main point of a vaccine is to develop

immunity to a specific disease, and allow the body to be prepared to respond correctly to an attack in the future. Sadly, a vaccine isn't guarantee to fully protect a person from the disease, due to each persons individual situation(diabetes, HIV infection, or lack of the b cell), the human immune system isn't perfect, so the doctors usually use adjuvants to boost the bodies immune response. Efficiency of a vaccine depend on many factors: The disease itself The strain of vaccines maintaining a time schedule for the vaccine "non-responders specific ethnicity Generally, even if the disease occurs in a vaccinated individual the case will be milder than usual.



### **Types**

There are many types of vaccines for each specific case. The vaccine for each disease is always weaker than the original strand, generally containing dead, inactive or purified products derived from the

organisms. Some types are:

- killed
- attenuated
- toxoid
- subunit
- conjugate
- various experimental

### **The Cancer Vaccine**

The cancer vaccine is one of the newest treatments in the battle against 3 different types of cancer. (Prostate, melanoma, neuroblastoma). Until just recently the only response we had to the cancer was surgery, chemotherapy, and radiation treatment. At this stage the vaccine uses the body's natural defense system to treat the disease rather than prevent it. As in typical vaccinations the body's immune system is boosted, and then the vaccine is injected with a shellfish protein combo. This combo is made specifically so that the body is able to recognize the cancer as a threat. Currently the prostate treatment is the furthest along. Doctors and scientists have been making great strides in the right direction, but the ideas haven't been around long enough to be perfected. This brings up many questions and concerns.

<http://www.msnbc.msn.com/id/21134540/vp/31030637#31030637>

<http://en.wikipedia.org/wiki/Vaccine>

<http://www.msnbc.msn.com/id/31019270/ns/health-cancer/>