

# **The Effect of External Supplements for Muscle Growth on Health**

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Ronnie Coleman, Eddie Abbew and Jo Linder are just a few of the many great bodybuilders from the preceding generations. Their physiques were considered god-like and they were put on a pedestal for it. However, aside from countless hours they, and others like them, had put into the gym, the greatness of their physiques, and nowadays almost all bodybuilders' physiques, can also be attributed to the use of external supplements such as protein powder, creatine or steroids. Although these supplements did allow them to achieve the epitome of human strength. Where are they now? How has the use of those external supplements benefitted or deteriorated them now? This essay dives into the long-term effect of external supplements on the bodies and health of its users.

When a person exercises they put their muscles under severe stress and pressure which ultimately results in a multitude of microscopic tears in the muscle tissues, this phenomenon is known as Muscle Hypertrophy. Therefore, the role of protein is essential as protein repairs the damaged muscle tissues thereby leading to increased muscle mass overtime. As a result all bodybuilders prioritize protein in their diet and typically consume protein powders daily. Although most bodybuilding coaches and athletes will most likely agree that protein powder is a safe and easy to use tool for muscle building, extensive use of protein powder has been directly linked with nephritic issues and disruption of liver function. Many protein powders have added ingredients which increase the calorie count of the drink, consumption would lead to increased blood sugar thereby placing an increased workload on the pancreas which produces more insulin to lower the blood sugar levels, which overtime can lead to cells becoming unresponsive to insulin, resulting in the pancreas producing even more insulin to maintain blood glucose. These heightened levels of insulin can lead to fatigue, blurred vision, nausea, anxiety and frequent urination. A study by Harvard Health shows that some protein powders even contain heavy metals such as lead, arsenic, cadmium and mercury. These can lead to heavy metal poisoning which can lead to organ failure and result in permanent health damage.

Anabolic steroids are a norm for all IFBB professional athletes. Steroids increase the rate at which muscle cells produce muscle proteins and in turn increase the number of muscle proteins produced, this increases the size of the muscle cells thereby increasing the muscle mass. The use of steroids can lead to nerve damage or fluid retention, both of which make

basic movement a discomfort as fluid retention can lead to pain in the area of swelling and nerve damage results in not having control over the area of one's body where the damage took place. Furthermore, steroids can also cause early heart attacks, strokes, liver tumors and kidney failure. Lastly, stopping the use of steroids after long-term use may lead to depression, this is due to the stress the change puts on one's brain and the withdrawal symptoms associated with steroids, and in some cases is also due to the change in one's appearance.

In conclusion, the use of protein powders and steroids pertain long-term risks that users should be aware of, use of organic protein powders in moderation may not pose as many health hazards as steroids would. Regardless, the use of external supplements should be monitored by certified coaches or dietitians.

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