

Knes - fitness for living



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Blood Doping It is seen that in the world of sports several methods are adopted by the athletes to improve their performance. One such method which the athletes adopt is related to the topic of blood doping. Blood doping is an act which involves the increase in the levels of hemoglobin in the body. This increased hemoglobin also increases the oxygen carrying capacity of the red blood cells. Hence by increasing the oxygen carrying capacity one can increase the amount of oxygen carried to the muscles to improve the performance of the muscles. Blood Doping is classified into three main forms known as Autologous blood doping, homologous blood doping and erythropoietin injection. Autologous blood doping is a process in which the blood of the athlete is drawn sometime back before the competition. The plasma and hemoglobin are then separated so that the plasma is injected into the athlete. The hemoglobin from the athlete is preserved for later use. After a span of two months the body naturally builds up the hemoglobin which was drawn from the body and it is just before the competition that the preserved hemoglobin is injected back into the athlete. Homologous blood doping is a process in which the hemoglobin of a donor is injected into the athlete. This type of doping carries more risks of transmitting diseases than the autologous blood doping. Erythropoietin is a hormone produced by kidney and liver which helps in increasing the production of red blood cells in the body. Synthetic erythropoietin is given in one form of blood doping which helps to increase the number of red blood cells in the body. Blood doping is known to have its own advantages and disadvantages. Research shows that athletes who perform blood doping have an increased aerobic capacity which helps them to use their muscles more. They also have a decreased heart rate for exercises which require strenuous work. The lactate produced is less

in comparison to the ones who do not perform the act of blood doping. Blood doping also provides the advantage of thermoregulation for the athletes who practice it. It increases the endurance of the individuals who go through it so that they can undergo strenuous work. The negatives of blood doping are as alarming as the fruitful advantages. It has been reported that several individuals have died because of their blood doping practices. As blood doping only involves the injection of hemoglobin into the individuals and not the plasma it increases the viscosity of the blood. The increased viscosity of the blood makes it difficult for the heart to pump blood and hence puts pressure on the heart. It also increases the blood pressure of the individual and includes the risks of clotting in the arteries which may lead to heart attack or stroke. Transfusions involved in blood doping can lead to the transmission of different diseases which may prove to be fatal for the person involved. Blood doping although, an effective process is banned in all types of legal competitions being held in the world today. Like performance enhancing drugs blood doping is also considered to be a process through which the rules of fair competition are violated. It is unethical because it snatches the rights of other athletes who are working hard to win the competition. Currently there is no such known process through which blood doping can be detected but knowing the consequences and morality of the act new determination techniques should be introduced. References Top of Form Peveler, Will. The Complete Book of Road Cycling & Racing. Camden (Maine) [etc.: McGraw-Hill, 2009. Print. Bottom of Form