Example of article review on the 2 kinds of muscle fibres are called slow and fas...

Science, Genetics

1. What are the 2 types of fibers found in muscle? What is the difference between the two in terms of function?

Slow Twitch (Type I)

This type is more efficient in oxygen usage and production of ATP, for continuous and long

activities. In comparison with fast twitch fibers they are slower but they get tired much later or

in other words they can work for a long time before they get fatigue.

Fast Twitch (Type II)

These fibers, in comparison with slow twitch fibres are better in production of strength or

speed than the slow twitch fibers, but they get fatigue much faster and the energy production

can’t last for a long time. We should remember that this group of fibers use anaerobic

metabolism to produce energy and that’s the other major difference with type I.

2. Did deleting the MED1 gene from the mouse DNA have a negative effect on muscles?

We can’t say for sure that the effect of deletion of this gene on muscles was good or bad,

because from one aspect it has improved the muscles, the size of mitochondria has been

increased in muscular cells which means production of more energy and a better metabolism.

But we shouldn’t forget that the fast twitch fibers have been changed into slow twitch fibers

and it can not be ideal always and we can even consider it as a negative effect. In general it

seems that deleting this gene has more positive effects on skeletal muscles than negative

effects.

3. Do you think we need the MED1 gene? Why or Why Not? Based on what you have read, did the removal of this gene cause any negative side effects on the body?

Yes, we do need the MED1. We should remember that MED1 has effects not only on skeletal

muscles but other tissues and organs such as mammary glands and fat tissue or oxidation of

fatty acids in liver, this research basically focuses on it’s effects on skeletal muscles and we still

do not know clearly what would happen in case of complete removal of this gene. According to

the research in case of abrogation of function of MED1 a group of genes are unleashed,

function of all these genes must be completely studied, then we can say that

removal of this

gene causes any side effects or not.

These issues are not clarified in this research but also no side effects are mentioned here. But

in future by manipulating the MED1 scientists may become able to create

new treatment

methods for obesity or diabetes.