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1. Educational questions. Answer by marking the correct answer.

1. Which of the following statements is true?

- Skeletal muscle mitochondrial production of reactive oxygen species (ROS) in COPD patients is similar to that in control subjects.
- Skeletal muscle mitochondrial production of ROS in COPD patients is higher than in control subjects.
- Skeletal muscle mitochondrial production of ROS in COPD patients is lower than in control subjects.
- Skeletal muscle mitochondria are unable to produce ROS.

2. According to what has been found in the present study:

- Increased ROS production by the mitochondria in COPD is only seen in the skeletal muscles of the leg.
- Increased ROS production by the mitochondria in COPD is only seen in the respiratory skeletal muscles.
- Increased ROS production by the mitochondria in COPD is seen both in the leg and respiratory skeletal muscles.
- Increased ROS production by the muscles is probably of inflammatory origin because the mitochondria do not produce ROS.

3. According to what has been found in the present study:

- ROS production is lower in state 3 mitochondrial respiration (*i.e.* when ATP is produced) than in state 4 (*i.e.* when ATP is not being produced in significant amounts and the transmembrane potential is higher).
- ROS production is higher in state 3 mitochondrial respiration than in state 4.
- ROS production is about the same in state 3 mitochondrial respiration as in state 4.
- Mitochondrial ROS production is undetectable in either state 3 or state 4.

4. Mitochondrial ROS production in the skeletal cell:

- Has no implications to the cell.
- Can harm several fundamental structures such as the mitochondrion itself, particularly during exercise.
- Is the fundamental cause of COPD.
- Is offset by the myoglobin.

5. The apparent mechanism of mitochondrial excessive ROS production in the skeletal muscle is:

- Hyperactivity of the mitochondria.
- Loss of superoxide dismutase.
- Excess of Krebs cycle enzymes.
- Respiratory chain blockade (*i.e.* increased respiratory chain enzymes not translated into more oxygen uptake and ATP production).

Please turn the page and fill in your details

CME Credit Application Form (continued)

2. Applicant personal details.

Reference No: ERS Membership No. (if known):

Date of Birth (DD/MM/YYYY):

Family Name: First Name:

Mailing Address:
.....

Postal Code: City: Country:

Telephone: + E-mail:

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I agree for payment of £30 (pounds sterling) to be taken from my credit card (MasterCard and Visa only). Details are as follows:

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*CV2 No: this is the number on the back of your card - without this number we are unable to process payments through the system

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