

Pengaruh hipoksia hipobarik intermitten terhadap aktivitas spesifik enzim laktat dehidrogenase (LDH) pada jaringan hati tikus = Hypoxia hypobaric intermittent effect to lactate dehydrogenase specific enzyme activity in liver of mouse.

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Abstrak

Latar belakang: Respon tubuh terhadap Hipoksia hipobarik intermitten sering dimanfaatkan dalam proses pre-conditioning hipoksia. Hati sebagai penghasil energi utama dan tempat metabolisme tubuh sangat terdampak dari kondisi hipoksia.

Tujuan: Menganalisa perubahan enzim metabolisme pada hati tikus yang mengalami hipoksia hipobarik intermitten.

Metode: Tikus Wistar dibagi menjadi 5 kelompok (n=5 perkelompok). Kelompok kontrol diberikan perlakuan normoksia. Kelompok perlakuan diberikan induksi hipoksia hipobarik intermitten menggunakan hypobaric chamber pada ketinggian 25000 kaki selama 1,2,3 dan 4 kali. Tikus kemudian dikorbankan pada ketinggian 5000 kaki dan diukur aktivitas spesifik enzim LDH pada 450 nm.

Hasil: Aktivitas spesifik enzim LDH pada jaringan hati yang mengalami hipoksia hipobarik intermitten meningkat secara signifikan ($p < 0,05$), dengan peningkatan tertinggi pada 3 kali pajanan.

Simpulan: Hipoksia hipobarik intermitten menyebabkan peningkatan aktivitas spesifik enzim LDH.

.....Backgrounds: Body response to intermittent hypoxia hypobaric frequently used as pre-conditioning hypoxia. This condition affected the liver as an energy supplier and body metabolism location.

Aim: Compare metabolism enzyme response in the liver that affected by intermittent hypoxia hypobaric.

Methods: Mice were divided into five groups (n=5 per group). Control group was given normoxia condition. Meanwhile exposed groups were given 1, 2, 3, and 4 times hypoxia hypobaric intermittent exposure. The exposure was using a hypobaric chamber at 25,000 feet. All of the LDH specific activities in the liver were measured at 450 nm.

Results: LDH specific activities in the liver increased significantly ($p < 0,05$). The peak activity was found at 3 times hypoxia hypobaric intermittent exposure.

Conclusion: LDH specific activities in the liver that affected by hypoxia hypobaric intermittent increased significantly.