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SUMMARY OF PERTINENT DECOMPRESSION PROTECTION DATA

The work reported herein was conducted at the following installations under NASA Defense Purchase Requests:

Aerospace Crew Equipment Laboratory
Philadelphia, Pennsylvania

School of Aerospace Medicine
Brooks AFB, Texas

Condition 1

2 hours preoxygenation at sea level followed by decompression to 35,000 feet and remaining there for 3 hours engaging in light exercise.

36 man exposures
18 completed
30 symptoms
18 forced descents

Condition 2

Same as above but with 3 hours preoxygenation at sea level.

44 man exposures
37 completed
9 symptoms
7 forced descents

Condition 3

2 hours preoxygenation at sea level followed by 9 hours on 100% O_2 at 5 psia, then decompressed to 35,000 feet for 3 hours breathing 100% oxygen and engaging in light exercise.

32 man exposures
27 completed
9 symptoms
5 forced descents

Condition 4

Same as above but with 3 hours duration at 5 psia breathing 100% O_2

26 man exposures
17 completed
15 symptoms
9 forced descents

Condition 5

3 hours preoxygenation at sea level followed by 3 hours on 100% O₂ at 5 psia, then decompressed to 35,000 feet for 3 hours breathing 100% oxygen and engaging in light exercise.

8 man exposures
8 completed
2 symptoms

Condition 6

2 hours preoxygenation at sea level followed by 9 hours at 5 psia breathing a 70% O₂ - 30% N₂ mixture then decompressed to 35,000 feet for 3 hours breathing oxygen and engaging in light exercise.

37 man exposures
14 completed
27 symptoms
23 forced descents