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# NASA TECH BRIEF

## *Manned Spacecraft Center*



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### **New Method Speeds Body Inert Gas Saturation and Utilizes Surface Decompression**

A method has been developed which reduces the time required to achieve a state of total saturation of body tissues with inert gas and which permits surface decompression to reacheive compatibility with standard atmosphere. An increase in the environment pressure during the saturation period and alternate use of air and oxygen during decompression are utilized.

Present saturation techniques require three days to achieve total nitrogen saturation of a diver's tissues. The new method reduces the required time to six hours and also reduces the required decompression time. Thus waiting time for planned underwater research is reduced and emergency surfacing is made possible.

The rate of nitrogen saturation is dependent upon the partial pressure of the gas in the environment. In the rapid saturation method, this partial pressure is increased by increasing the diver's depth during the process. After total saturation is achieved, he rises to the working depth.

This information may be of use to those segments of the scientific and industrial communities engaging in

underwater research, exploration or construction as a means of increasing personnel availability and safety.

#### **Note:**

Requests for further information may be directed to:

Technology Utilization Officer  
Manned Spacecraft Center, Code JM7  
Houston, Texas 77058  
Reference: TSP71-10330

#### **Patent source:**

No patent action is contemplated by NASA.

Source: Peter O. Edel  
J. and J. Marine Diving Co., Inc.  
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