EXERCISE AND DCS ONSET – CAN I EXERCISE BEFORE OR AFTER A DIVE AND NOT GET DCS?

Is there a problem with working out before or after I go diving? I love to dive, but I'm in training and don't want to miss a workout? This is a question that I am frequently asked so I did a little research and came up with the below answer.

Nitrogen absorption and elimination is largely a matter of temperature and circulation. Gas exchange works very well at constant temperature. After diving when body tissues have been loaded with nitrogen, activities such as running, weight lifting or a heavy workload can shake up the bottle of soda, so to speak. So exercise after diving requires that you give tissue nitrogen levels time to drop, making bubbling generation less likely in the tissues. You should always start off a dive well rested with muscle that is cooled down and not calling for more oxygen and blood flow.

Exercise before diving may be your best bet. We all enter the water warm and take on nitrogen at a similar rate. Once in the water we begin to cool, vaso constrict, and take on less nitrogen. Which means after the dive, we are still cool and not off gassing as a mathematical model may predict. This would appear to favor a diving after exercise procedure. In the 90's, an altitude study by Mike Powell Ph.D., found that if you waited 2 hours to go to altitude after doing a series of deep knee bends, the number of Doppler bubbles produced at altitude deceased to a baseline level after a two hour wait.

Although there is no definitive answer, a two-hour wait might be considered a minimum waiting guideline for diving after exercise. A more conservative suggestion would be four hours to allow you body to cool down and rest before you add a nitrogen exposure.

Remember to rehydrate after exercise. Although dehydration doesn't cause decompression illness, increased fluid losses decrease you're off gassing efficiency, so be sure to get plenty of water on dive and exercise days.