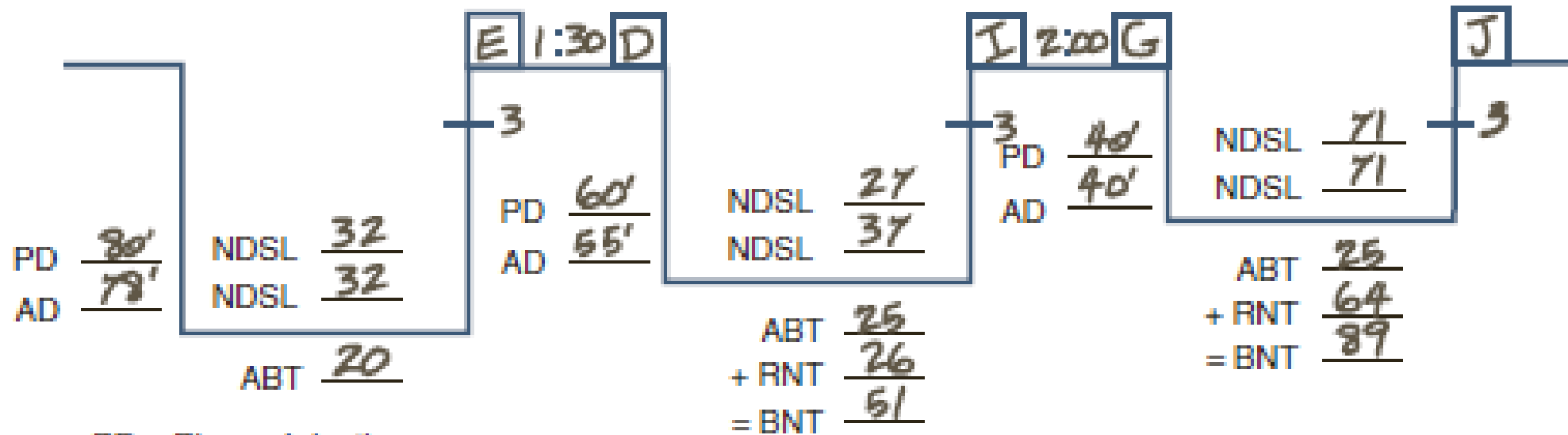


# 10. Diving Skills



PD = Planned depth  
 AD = Actual depth

## Rules

**Ascent Rate.** Divers should ascend at 30 feet per minute or slower.

**Dives Less Than 25 Feet.** Dives less than 25 feet do not have a specific No Decompression Stop Limit. However, if conducted as repetitive dives, they must be calculated as a 35 foot dive for Residual Nitrogen Times (RNT), Table C.

**Exceeding the No Decompression Stop Limits.** If divers err and stay longer than the times allowed on the No Decompression Stop Limit, Table A, the divers have exposed themselves to an increased decompression requirement and must refer to the Decompression Stops Table, Table D, for required decompression stops to complete the dive. Once on the surface, these divers should not dive again for at least 12 hours or fly for at least 24 hours.

**Flying After Diving.** The longer the surface interval before flying, the less likely a diver will experience decompression sickness. A minimum surface interval of 12 hours is required before ascent to altitude in a pressurized aircraft (or a ground altitude of 1000 feet above sea level). Divers who plan to make multiple dives for several days or computer-assisted dives should take extra precaution and wait an extended surface interval of greater than 12 hours before flying or ascending to altitude. Divers who have made dives requiring decompression stops should wait a minimum of 24 hours before flying or ascending to altitude.

**High Altitude Diving.** These Air Diving Tables are not to be used for diving at altitudes greater than 1000 feet above sea level without calculating altitude adjustments.

**Order of Dives.** All repetitive dives should be conducted with each successive dive equal in depth or shallower than the previous dive.

**Sport Diving Maximum Depth.** Sport divers should not exceed 100 feet of depth.

**Sport Diving Time Limit.** On any dive, the Total Bottom Time (TBT) should not exceed the **No Decompression Stop Limit**. Dives requiring mandatory decompression stops should not be planned.

## Definitions

**Bottom Time (BT).** The elapsed time in minutes starts when the diver leaves the surface in descent and stops when the diver begins safety stop or surfaces (round up to next whole minute). On repetitive dives, this is Actual Bottom Time (ABT).

**Depth.** The depth of a dive; use the maximum depth attained during the dive in feet or meters of seawater. When depth is not indicated on the table, use the next greater depth available.

**No Decompression Stop Limit.** The longest amount of time a diver can spend at depth without requiring a decompression stop. Table A lists these for all depths. For repetitive dives, the Residual Nitrogen Time (RNT) must be added to the Bottom Time (BT) and the total bottom time (TBT) must not exceed the No Decompression Stop Limit.

**Repetitive Dive.** Any dive conducted within the time period specified by the surface interval table (Table B) of a previous dive with a minimum surface interval of 10 minutes. For repetitive dives of less than 35 feet, use the RNT (Table C) values for 35 feet to calculate Total Bottom Time (TBT).

**Repetitive Group Designation (RG).** Letters that relate to the amount of residual nitrogen in a diver's tissues for the time specified in the Surface Interval Table.

**Residual Nitrogen Time (RNT).** Located in Table C, an amount of time, in minutes, which must be added to the Bottom Time (BT) of a repetitive dive to calculate Total Bottom Time (TBT). Represents residual nitrogen still in a diver's tissues from previous dives.

**Safety Stop.** A 3-minute minimum safety stop at 15-25 feet is recommended at the end of all dives.

**Surface Interval Time (SIT).** Located in Table B, the elapsed time from when a diver surfaces following a dive to the time (next whole minute) that diver starts the descent of the next dive. SIT must be a minimum of 10 minutes.

**Total Bottom Time (TBT).** Calculated by adding the Bottom Time (BT) and the Residual Nitrogen Time (RNT). For times not indicated at a particular depth, use the next longer time available for that depth.

- A cold or strenuous dive—When a dive is particularly cold or strenuous, use the next greater time for the dive. If the dive is both cold and strenuous, use the next greater time and depth.
- Variations in the rate of ascent—If you ascend faster than 30 feet (9 m) per minute, extend your rest stop by at least two minutes. The faster you ascend, the more you should increase the stop time.
- Multilevel dives—Treat dives to multiple levels as square-profile dives, as if all the time of the dive was at the deepest depth of the dive. Do not attempt to extrapolate the dive tables.
- Omitted decompression—If you need to decompress but fail to do so, use the following procedure for omitted decompression. If you have no symptoms of decompression illness after the dive, remain out of the water, breathe oxygen in the highest concentration possible, rest, drink water, and be alert for symptoms of decompression illness. Wait 24 hours before diving again. If you suspect decompression illness, proceed at once to a hyperbaric facility for a medical examination. The USN has a procedure for in-water decompression, but diving medical experts agree that this procedure is inappropriate unless there is no alternative.

- A rest stop that causes your ABT or TBT to exceed NDSL—If a rest stop causes ABT or TBT to exceed the maximum time limits, determine your repetitive group letter designation using the NDSL for the profile.
- Diving after mandatory decompression—After a dive that requires decompression, wait at least 24 hours before diving again.
- A repetitive dive with an RNT that exceeds the ABT of the previous dive—If the RNT for a repetitive dive exceeds the ABT of the previous dive, use the RNT for planning the repetitive dive.
- Altitude after diving—Ascending to altitude after diving increases the likelihood of decompression illness because of further reduction in pressure. Driving in the mountains or flying after diving can cause decompression illness that would not occur if you remained at sea level until you eliminated the excess nitrogen.

### Starting repetitive group

Altitude (ft/m)	ABC	D	E	F	G	H	I	J	K	L	Group*
2,000/610	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	2:26	K
3,000/914	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	2:37	4:08	J
4,000/1,219	0:00	0:00	0:00	0:00	0:00	0:00	0:00	2:53	4:30	5:51	I
5,000/1,524	0:00	0:00	0:00	0:00	0:00	0:00	3:04	4:57	6:29	7:44	H
6,000/1,829	0:00	0:00	0:00	0:00	0:00	3:20	5:24	7:12	8:38	9:54	G
7,000/2,134	0:00	0:00	0:00	0:00	3:41	6:02	8:06	9:43	11:10	12:36	F
8,000/2,438	0:00	0:00	0:00	4:08	6:50	9:11	11:04	12:41	14:19	15:40	E
9,000/2,743	0:00	0:00	4:57	8:06	10:48	12:58	14:51	16:39	18:11	23:09	D
10,000/3,048	0:00	6:18	10:37	13:25	15:56	18:05	20:10	21:18	23:24	24:50	C

Note: Times represent the minimum recommended time delay before ascending to the listed altitude and are USN surface interval times with a delay factor of 5.4. Times are in hours:minutes (for example, 5:24 is 5 hours 24 minutes).

\*Recommended minimum repetitive groups for indicated elevations.

Times in boxes are emergency decompression times.

<b>Sample</b>	<b>Planned time</b> <u>30 minutes</u>	<b>Next greater time</b> <u>40 minutes</u>	<b>Next greater time</b> <u>50 minutes</u>
Planned depth <u>60 ft</u>	0	0	0
Next greater depth <u>70 ft</u>	0	0	5
Next greater depth <u>80 ft</u>	0	5	10



0	5
5	10

Planned depth \_\_\_\_\_

Next greater depth \_\_\_\_\_

Next greater depth \_\_\_\_\_

Planned time \_\_\_\_\_

Next greater time \_\_\_\_\_

Next greater time \_\_\_\_\_


... plan ahead for unexpected events

- surface downcurrent from a boat when you had planned to surface in front of it,
- are unable to reach or use the exit point you had selected on shore,
- end the dive a long distance from your exit location,
- exceed the maximum allowable bottom time (ABT or TBT) for a dive,
- experience a failure of your dive computer while diving, or
- ascend directly to the surface without precautionary decompression.

