



# Scuba Diving Injuries Among Divers Alert Network Members 2010-2011

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# Goals

- Ascertain a baseline diving associated injury rate
- Relationship between injuries and age, certification level and diving experience

# Introduction

- Self-report measure
- IRB approved
- Online survey sent to 30,000 randomly selected DAN members

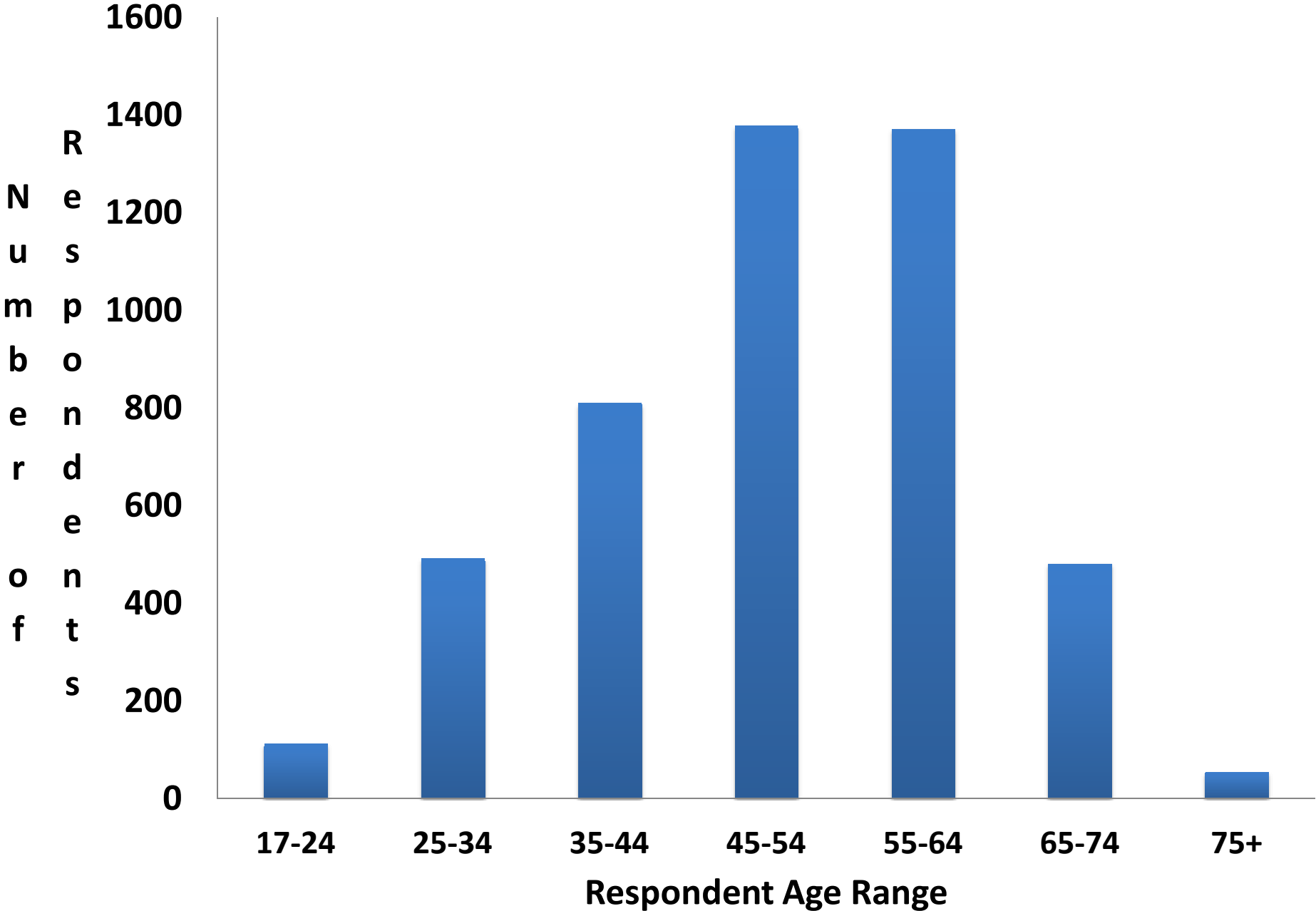
# Materials and Methods

- Required 15-20 min to complete
- Respondents had to be >18y and must have dove at least once during 2010-2011
- Only invitees had online access and could respond only once

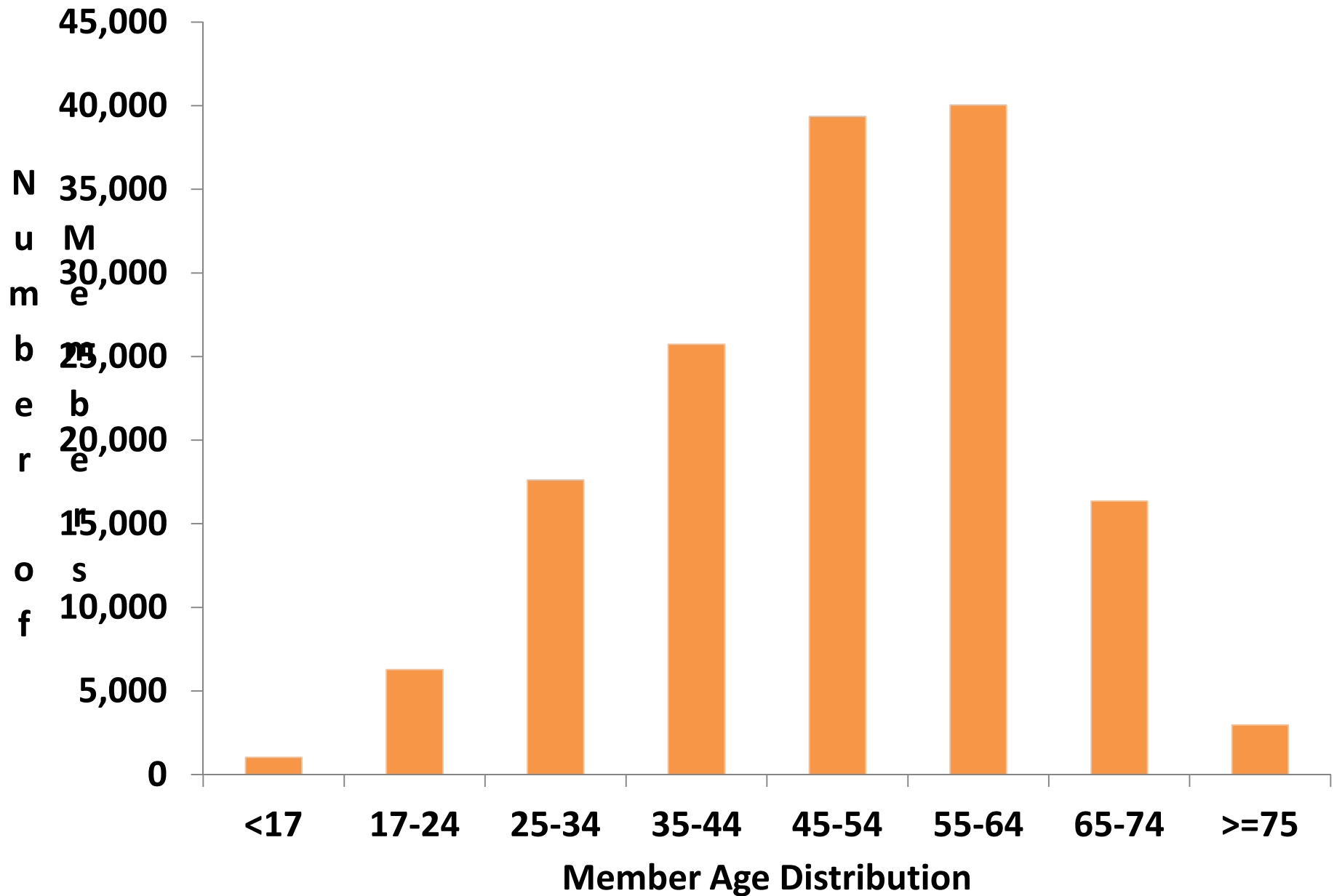
# Results

Respondents		5514
Complete surveys		4859
Age (median; range)		52 (18-90)
Males (%)		75
Dives	Total	160,288
	mean, SD	34.6 (43.9)
	median, 5-95 percentile	20 (3-100)

# Respondents by Age



## DAN Memberships by Age



# Injuries

Occurrences	5865
n Injured Divers (all types)	1580
Treatment Provided	665
Advised HBOT	11
HBOTs Recommended	18
HBOTs Provided	16

**\*Table 2: Self-reported diving-related injuries by participant's gender**

<b>SELF-REPORTED DIVING INJURIES</b>	<b>Total N (%)</b>
<b>Ear problems (other than hearing loss)</b>	1180 (20.1)
<b>Headache</b>	906 (15.4)
<b>Sinus troubles</b>	655 (11.2)
<b>Puncture, cut wound</b>	528 (9.0)
<b>Overexertion, low back pain, sprain or strain</b>	497 (8.5)
<b>Squeeze</b>	490 (8.4)
<b>TOTAL</b>	5865
<b><i>Decompression Sickness<sup>(1+2+3)</sup></i></b>	282

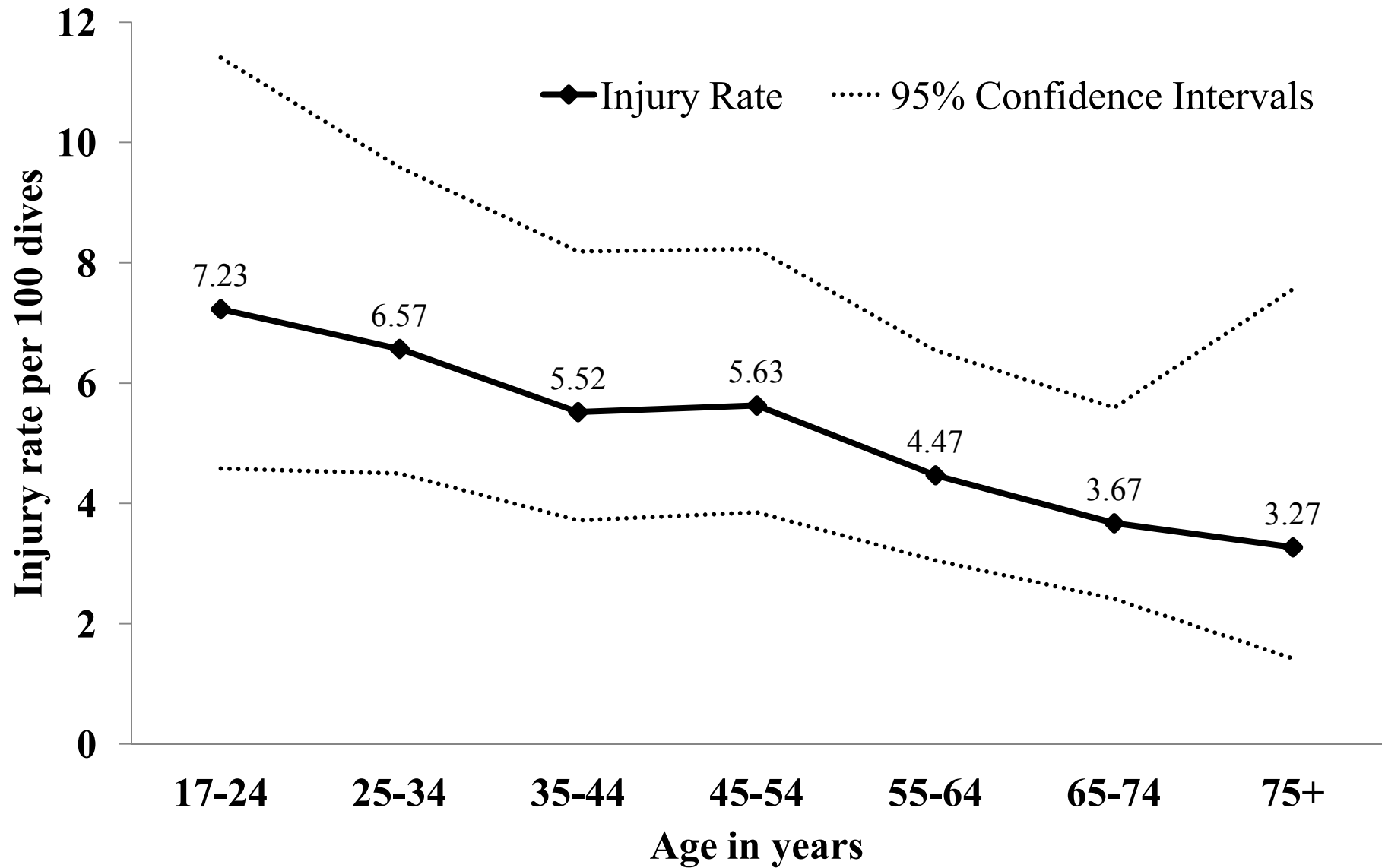
\*Selected data from Table 2

# DCS Symptoms

Symptom onset within several hours of surfacing

- Joint pain
- Skin rash
- Muscular weakness

**Figure 1: Adjusted\* injury rates by age of the participants**



# Summary

- Crude injury rate associated with diving ~3 per 100 dives
- 6% of reported injuries had possible DCS
- Incidence of reported DCS type symptoms (n=282) was > than the number who received treatment (n=11)
- Most common injury types were diving related, but not DCS

# Summary

- 14% decrease in DCS rates for every 10 year increase in age
- Those with advanced and instructor level certifications reported fewer injuries than basic level divers
- Reporting bias warrants interpretative caution