

PULMONARY SYMPTOMS AMONG PARTICIPANTS IN THE "NORWEGIAN DIVER 2011" PROJECT

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Divers' lung function

- Reduced airways conductance with lower FEV_1 and maximal expiratory flow rates than predicted
- The reduction in the lung function variables is related to cumulative diving exposure
- Not reversible by retirement
- The prevalence of pulmonary symptoms among professional divers is not known

Divers' lung function

Consensus statement Godøysund 1993

«There is evidence that changes in bone, the CNS and the lung can be demonstrated in some divers.....»

«The changes are in most cases minor and do not influence the divers' **quality of life.**»

«The Norwegian diver 2011»

The Diving Register by The Norwegian Labour Inspection Authority comprises all occupational inshore divers who have ever held a certificate since 1980.

Of the 6151 divers, 89.8% could be identified with the National Identification Number, providing their home addresses.

«The Norwegian diver 2011»

- A questionnaire mailed to all identified divers, one reminder
- Response rate 48.7% , no difference between divers holding different certificates
- The 2663 male responders were categorized into:
 - previous divers (1588)
 - present divers (595)
 - references, holding class S certificate (480)
- Pulmonary symptoms were assessed with a modified MRC questionnaire validated in large Norwegian population-based epidemiological studies (Bakke et al. J Epidemiol Community Health 1990).

«The Norwegian diver 2011» - Results

	Previous Divers n = 1588	Present Divers n = 595	References n = 480
Age (yrs)	48	40	44
Diving experience (yrs)	17	16	16
Cumative number of dives	550	700	400

All numbers median

«The Norwegian diver 2011» - Results

	Prev. Divers n = 1588	Present Divers n = 595	References n = 480
Morning cough*	16.3	11.2	8.1
Chronic cough*	20.8	14.9	10.7
Phlegm*	22.3	17.5	12.4
Wheezing*	11.2	5.0	3.0
Breathlessness			
Grade I	0.1	0.0	0.2
Grade II*	7.1	2.1	1.9
Grade III*	9.0	5.0	5.4

*: $p < 0.01$ for trend when adjusted for age and smoking habits

«The Norwegian diver 2011» - Discussion

- Low response rate
- The prevalence of pulmonary symptoms was related to cumulative diving experience
- Pulmonary symptoms are associated with reduced FEV_1 and HRQL