

**STATISTICS 2**  
**WS 2017 (Mag. Thomas Forstner)**

Course-Number: 366.554

---

- 26) A group of 20 friends went out to the pub and the next day seven of them were ill. They suspect that it may have been something they ate, maybe the fish.

	ill	not ill
ate fish	5	3
didn't eat fish	2	10

- a) Calculate the Odds-Ratio regarding the factor “ate fish” and calculate the corresponding 95% confidence interval.
- b) Verify with an asymptotic test, if the Odds-Ratio differs statistically significant from 1. ( $\alpha = 5\%$ ).
- c) Calculate the Risk-Ratio regarding the factor “ate fish” and calculate the corresponding 95% confidence interval.
- 27) In a study (Addiction Research Foundation Ontario Student Drug Use Survey, 1993 – 1995) to examine the relationship between smoking and gender among students, the results shown in the table below were obtained.

	Smoking tobacco	
	Yes	No
Male	956	2691
Female	957	2855

- a) Calculate the Odds-Ratio for a man smoking tobacco regarding to women and the corresponding 95% confidence interval.
- b) Calculate the Risk-Ratio for a man smoking tobacco regarding to women and the corresponding 95% confidence interval.
- 28) The association of religious confession between the West German states respectively the Eastern German states should be examined based on a sample of 2804 persons.

	West	East
protestant	914	154
catholic	899	35
other confession	118	7
no confession	345	332

- a) Calculate an appropriate measure of association.
- b) Verify if this association is statistically significant ( $\alpha = 5\%$ ).