



KLINIKUM
DER UNIVERSITÄT MÜNCHEN

CAMPUS CITY CENTRE

INSTITUTE AND OUTPATIENT CLINIC FOR
OCCUPATIONAL; SOCIAL AND ENVIRONMENTAL MEDICINE



Questionnaire

Resistance in Wastewater: Transmission Risks for Employees and Residents around Wastewater

OCCUPATIONAL AND ENVIRONMENTAL EPIDEMIOLOGY & NET TEACHING UNI

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Study-ID:

Please follow the following instructions to help you fill out the questionnaire:

Please mark your answer to each question by marking the area inside the answer box with a cross as shown in the example.

EXAMPLE:

If you make a mistake and need to correct it, please fill in the whole box.

EXAMPL

To answer open questions, please write clearly and in block letters on the corresponding row. If a number is required, please write it clearly in the corresponding field.

EXAMPLE

Please make sure to answer all questions by going line by line. You may skip questions only when the text explicitly indicates it..

EXAMPLE No..... -> Please continue with question XY
ja 1

If you mark "yes", please continue on with the next question. If you mark "no", please proceed only to the question indicated by the arrow.

Please check again for completeness after you have answered the questionnaire.

**Please do not forget to fill in the informed consent!
We will not be able to evaluate your questionnaire without your signed consent!**

SOCIO-DEMOGRAPHICS

1. What is your date of birth?

|_|_| |_|_|_|_|
Month Year

2. In which country were you born?

3. Are you male or female?

- male
- female

4. What is your education level? If you have several degrees, please choose the highest!

- Primary education
- Lower secondary education
- Degree of a technical college
- Higher secondary education
- Other graduation
- Left school without education
- Not yet graduated

JOB HISTORY

Please answer "yes" or "no" whether possible. If you are unsure, please answer with "no".

5. Have you worked in the past 12 months?

Every occupation you have had for at least 1 months is relevant. It does not matter whether you worked at home (e.g. househusband/housewife) or out of home, full-time or part-time, paid or unpaid or self-employed (e.g. in a family business).

- No → Please continue with question 12
- Yes

6. Which kind of jobs and /or internships have you had within the last 12 months?

If you have more than one job in the same company or have two different jobs at the same time, please name them separately. Please begin with your most recent occupation.

Occupation/ Job	Line of Work	When did you start working in this job? (month/year)	If applicable, when did you stop working in this job? (month/year)	Hours per week
		_ _ / _ _ _ _	_ _ / _ _ _ _	_ _
		_ _ / _ _ _ _	_ _ / _ _ _ _	_ _
		_ _ / _ _ _ _	_ _ / _ _ _ _	_ _
		_ _ / _ _ _ _	_ _ / _ _ _ _	_ _
		_ _ / _ _ _ _	_ _ / _ _ _ _	_ _

7. Have you worked in a livestock farm in the last 12 months?

- No
- Yes

8. Have you been in contact with animal manure at work in the past 12 months?

If you are unsure, please answer with "No"!

- No
- Yes

9. Within the past 12 months, have you personally performed slaughterhouse work of slaughterhouse activities?

- No
- Yes

10. In your current job, how often have you typically had direct interaction or contact with patients within the last 12 months?

- Never
- Rarely
- Sometimes
- Often
- Always

11. How often have you worked with human tissue, blood, body fluids (urine, faeces, vomit, sputum, saliva) or primary cell lines within the last 12 months?

- Never
- Rarely
- Sometimes
- Often
- Always

ENVIRONMENT

Please answer "yes" or "no" wherever possible. If you are unsure, please answer with "no".

12. Have you travelled abroad in the past 12 months?

- No → Please continue with question 15
 Yes

13. How many times have you travelled to the following continents in the past 12 months?

	Never	Once	2-3 times	More than 3 times	Don't know
Europe	<input type="checkbox"/>				
North Africa (north of the Sahara)	<input type="checkbox"/>				
Africa (except North Africa)	<input type="checkbox"/>				
Asia	<input type="checkbox"/>				
North America	<input type="checkbox"/>				
Central America / Mexico	<input type="checkbox"/>				
South America	<input type="checkbox"/>				
Australia and Oceania	<input type="checkbox"/>				

14. If you have travelled to Europe, have you been in one of the following countries: Italy, Slovenia, Bulgaria or Greece?

- No
 Yes

15. Do you currently live in a farm?

- No
 Yes

16. Is your home located within 500 m from one or more animal stalls?

- No
 Yes, from one
 Yes, from two
 Yes, from more than two, in fact |_|_| stalls (please enter the number)

17. Is your workplace located within 500 m from one or more animal stalls?

- No
- Yes, from one
- Yes, from two
- Yes, from more than two, in fact |_| stalls (please enter the number)

18. Have you regularly visited agricultural facilities keeping animals (at least once a month) within the last 12 months (e.g. to buy milk or eggs)?

- No → Please continue with question 20
- Yes

19. If yes, how often?

- less than once per week
- 1-3 days per week
- 4-7 days per week

20. In the last 12 months have you entered the barn of the following animals?

	No	Yes	Don't know
Pigs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Poultry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dairy cattle, calves	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

21. How often in the last 12 months have you entered the following barns?

	Less than once per week	1-3 days per week	4-7 days per week
Barn for pigs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Barn for poultry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Barn for dairy cattle or calves	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

22. Did you own any of the following animals in the last 12 months?

	No	Yes
Horse	<input type="checkbox"/>	<input type="checkbox"/>
Dog	<input type="checkbox"/>	<input type="checkbox"/>
Cat	<input type="checkbox"/>	<input type="checkbox"/>

HOSPITAL VISITS AND MEDICATION

Please answer "yes" or "no" wherever possible. If you are unsure, please answer with "no".

23. In the last 12 months, have you been in a hospital for more than 12 hours?

- No → Please continue with question 26
- Yes

24. Why were you i the hospital for more than 12 hours? (Multiple answers possible)

- Visitor → Please continue with questions 26
- Professional → Please continue with question 26
- Patient

25. Did you have any surgery?

- No
- Yes

26. Do you have any chronic condition that requires frequent (at least once a month) hospital visits? (e.g. dialysis kidney dysfunction, cancer, others....)

- No
- Yes → How frequent? |_|_| times per week or |_|_| times per month

27. Have you taken an antibiotic within the last 12 months?

- No
- Yes
- Do not know

Antibiotic: A drug for bacterial infectious diseases

28. In the last 12 months, have you used or taken any antacids? (Heartburn remedies, gastric protection, gastric acid neutralization agents, proton pump inhibitors, e.g. omeprazole, esomeprazole, lansoprazole, dexlansoprazole, rabeprazole)

- No
- Yes
- Do not know

Antacid: An agent that neutralizes acidity or reduces production, especially in the digestive system.

YOUR HEALTH AND WELL BEING

Please answer "yes" or "no" wherever possible. If you are unsure, please answer with "no".

29. In the last 12 months, how often did you have loose, mushy or watery stools?

- Never
- Rarely
- Sometimes
- Often
- Always

30. In general, would you say your health is

- Excellent
- Very good
- Good
- Fair
- Poor

31. How much do you feel bothered by any odors in your living environment coming from the neighbourhood (especially from the wastewater treatment plant)?

- Not at all
- A little
- Clearly
- Strongly

The next few questions will be mostly about your breathing. Please answer "yes" or "n" wherever possible. If you are unsure, please answer with "no".

32. Have you ever had wheezing or whistling in your chest at any time in the last 12 months?

- No → Please continue with question 34
- Yes

33. Have you had this wheezing or whistling when you did not have a cold?

- No
- Yes

34. Have you had an attack of shortness of breath that came on during the day when you were at rest at any time in the last 12 months?

- No

Yes

35. Have you had an attack of shortness of breath that came on FOLLOWING strenuous activity in the last 12 months?

- No
 Yes

36. Have you ever been woken up by an attack of shortness of breath at any time in the last 12 months?

- No
 Yes

37. Do you cough on most days for as much as 3 months each year?

- No → Please continue with question 39
 Yes

38. If yes, have you had this affliction for at least 2 years?

- No
 Yes

39. Do you bring up any phlegm on most days for as much as 3 months each year?

- No → Please continue with questions 41
 Yes

40. If yes, have you had this affliction for at least 2 years?

- No
 Yes

41. Have you ever had asthma?

- No → Please continue with questions 43
 Yes

42. Was this confirmed by a doctor?

- No
 Yes

ABOUT YOUR FAMILY

Please answer "yes" or "no" wherever possible. If you are unsure, please answer with "no".

43. Do you have children? (Including adopted children or stepchildren)

- No → Please continue with question 45)
 Yes

44. How many children do you have? (Including adopted children or stepchildren)

|_|_| children

45. Besides yourself, are there other people living in your household?

- No → Please continue with question 51
 Yes
 Prefer not to say → Please continue with question 51

46. Please indicate which of the following people (besides you) live in your household

	No	Yes	How many
Mother	<input type="checkbox"/>	<input type="checkbox"/>	
Father	<input type="checkbox"/>	<input type="checkbox"/>	
Partner/Spouse	<input type="checkbox"/>	<input type="checkbox"/>	
Children	<input type="checkbox"/>	<input type="checkbox"/>	
Others, Who (e.g. grandmother)?			
• _____	<input type="checkbox"/>	<input type="checkbox"/>	
• _____	<input type="checkbox"/>	<input type="checkbox"/>	
• _____	<input type="checkbox"/>	<input type="checkbox"/>	
• _____	<input type="checkbox"/>	<input type="checkbox"/>	

47. Is a member of your household (besides you) currently working in one of the following areas? (multiple answers possible)

- Farm
- Slaughterhouse
- Nursing Home
- Physician's practice or hospital
- None of the mentioned above

48. How many times has a member of your household (besides you) travelled to the following continents in the past 12 months?

	Never	Once	2-3 times	More than 3 times	Don't know
Europe	<input type="checkbox"/>				
North Africa (North of the Sahara)	<input type="checkbox"/>				
Africa (except North Africa)	<input type="checkbox"/>				
Asia	<input type="checkbox"/>				
North America	<input type="checkbox"/>				
Central America/Mexico	<input type="checkbox"/>				
South America	<input type="checkbox"/>				
Australia and Oceania	<input type="checkbox"/>				

49. Has a member of your household (besides you) been hospitalized for more than 12 hours in the last 12 months?

- No
- Yes

50. Have any of your family members (besides you) taken antibiotics within the last 12 months?

- No
- Yes
- Do not know

Antibiotic: A drug for bacterial infectious diseases

Questions for WWTP employees

CURRENT WORK IN WWTPS

All these questions refer to the wastewater treatment plant in which you received this questionnaire or the link to the questionnaire.

51. Through which wastewater treatment plant did you receive information about this study?

52. Do you work in another wastewater treatment plant besides the one where you received the questionnaire?

- No → Please continue with question 55
- Yes

53. In which other wastewater treatment plant(s) have you worked?

Wastewater treatment plant 1: _____

Wastewater treatment plant 2: _____

Wastewater treatment plant 3: _____

Wastewater treatment plant 4: _____

Wastewater treatment plant 5: _____

Wastewater treatment plant 6: _____

Wastewater treatment plant 7: _____

Wastewater treatment plant 8: _____

Wastewater treatment plant 9: _____

Wastewater treatment plant 10: _____

54. Since when have you worked in these wastewater treatment plants?

	Month	Year
Wastewater treatment plant 1:	_ _	_ _ _ _
Wastewater treatment plant 2:	_ _	_ _ _ _
Wastewater treatment plant 3:	_ _	_ _ _ _
Wastewater treatment plant 4:	_ _	_ _ _ _
Wastewater treatment plant 5:	_ _	_ _ _ _
Wastewater treatment plant 6:	_ _	_ _ _ _
Wastewater treatment plant 7:	_ _	_ _ _ _

	Month	Year
Wastewater treatment plant 8:	_ _	_ _ _
Wastewater treatment plant 9:	_ _	_ _ _
Wastewater treatment plant 10:	_ _	_ _ _

55. Do you work in the following wastewater treatment plant facilities? If so, how often do you work here?

If steps are combined, please answer "yes" if you are exposed to each sub step.

	Never	Less than once per week	1-3 days per week	4-7 days per week
Air release valve or manhole	• <input type="checkbox"/>	• <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pumping station	• <input type="checkbox"/>	• <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Headworks	• <input type="checkbox"/>	• <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Screening	• <input type="checkbox"/>	• <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pre-aeration	• <input type="checkbox"/>	• <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Grit removal	• <input type="checkbox"/>	• <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flow equalization	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Septage receiving and handling facilities	• <input type="checkbox"/>	• <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Side stream returns (including digester decant, dewatering return flows, or backwash water)	<input type="checkbox"/>	<input type="checkbox"/>	• <input type="checkbox"/>	• <input type="checkbox"/>
Primary clarifier	• <input type="checkbox"/>	• <input type="checkbox"/>	• <input type="checkbox"/>	• <input type="checkbox"/>
Aeration basin	• <input type="checkbox"/>	• <input type="checkbox"/>	• <input type="checkbox"/>	• <input type="checkbox"/>
Secondary clarifier	• <input type="checkbox"/>	• <input type="checkbox"/>	• <input type="checkbox"/>	• <input type="checkbox"/>
Return sludge	• <input type="checkbox"/>	• <input type="checkbox"/>	• <input type="checkbox"/>	• <input type="checkbox"/>

56. Do you work in the following sludge facilities? If so, how often do you work here?

	Never	Less than once a week	1-3 days per week	4-7 days per week
Sludge thickening tank	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wet sludge storage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wet sludge loadout facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Digestion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Never	Less than once a week	1-3 days per week	4-7 days per week
Mechanical dewatering	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sludge storage after mechanical dewatering	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dry sludge loadout facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Composting facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alkaline stabilisation (stabilised solids generation resulting from reaction with lime)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sludge drying bed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

57. Do you perform cleaning operations at work?

- No → Please continue with question 59
 Yes

58. During cleaning work, do you use a high-pressure cleaner? If yes, how often?

- No
 Yes: ___ hours/day *or* ___ days/week

59. Do you use treated effluent for cleaning?

- Never Rarely Sometimes Often Always

60. Do you eat at other places besides offices or canteens during work?

- Never Rarely Sometimes Often Always

61. If yes, where do you eat? _____

PROTECTIVE MEASURES

62. Do you use protective clothing or equipment while working?

- No
 Yes, but just for specific tasks
 Yes, most of the time at work

63. How often do you use protective gloves or breathing protection?

64. After your workday, do you take a shower?

:	Everyday	Several times per week	Several times per month	Several times per year	Not at all	For which asks?
Protective gloves	<input type="checkbox"/>					
Surgical mask	<input type="checkbox"/>					
Face mask including filter	<input type="checkbox"/>					
Face mask with air pressure	<input type="checkbox"/>					
Other (which one): _____	<input type="checkbox"/>					
Other (which one): _____	<input type="checkbox"/>					

- No → Please continue with question 66
- Yes, at work → Please continue with question 66
- Yes, at home → Please continue with question 66
- No, generally not, only after specific activities

65. After which specific activities do you take a shower? _____

66. How often do you change your work clothes?

- Never → Please continue with question 68
- Once a month → Please continue with question 68
- Once a week → Please continue with question 68
- After specific activities

67. Please list those activities: _____

68. Where do you wash your working clothes?

- At home
- At work
- A company washes my clothes

69. Do you put on your work clothes at home or at work?

- At home
- At work

Thank you very much for participating in the AWARE Study!

With your help we came closer to achieving our goals of the study

If you have any further questions, please do not hesitate to contact us via our webpage www.aware-study.eu or via email: arb.aware@med.uni-muenchen.de.

Here, you have the possibility to make comments:

Have you already signed the informed consent? Otherwise, we cannot include your questionnaire data in the AWARE Study!



AWARE

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