



UNIVERSITY OF TASMANIA



THE UNIVERSITY OF MELBOURNE

## TASMANIAN LONGITUDINAL HEALTH STUDY (TAHS):

What are the causes of increased airway reactivity in middle-age?

Tasmanian Longitudinal Health Study



### LAB BOOKLET

Tasmanian Longitudinal Health Study



- Associate Professor Shyamali Dharmage, The University of Melbourne
- Professor E. Haydn Walters, The University of Tasmania
- Professor Michael Abramson, Monash University
- Associate Professor Paul Thomas, The University of New South Wales
- Doctor Bircan Erbas, La Trobe University
- Doctor Melanie Matheson, The University of Melbourne
- Associate Professor David Johns, The University of Tasmania
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Associate Investigators:

- Doctor Stephen Morrison, Royal Brisbane and Women's Hospital
- Associate Professor Richard Wood-Baker, Royal Hobart Hospital
- Doctor Greg Haugh, Launceston General Hospital
- Doctor Ian Feather, Gold Coast Hospital
- Doctor Geza Benke, Monash University
- Associate Professor Justin Walls, The University of Tasmania
- Doctor John Marrone, The University of Tasmania

Participant ID:

Family ID:

Participant Initials :

Participant DOB :

Appointment Date :

Scientist initials

Centre Number

(Centre number: Menzies Research Institute = 1, Launceston General Hospital= 2, Burnie (North West Regional) Hospital= 3, Alfred Hospital= 4, Royal Brisbane and Women's Hospital= 5, Gold Coast Hospital= 6, Prince of Wales Hospital= 7)

Participant ID:

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## PARTICIPANT CONTACT DETAILS

Please record your full name and contact details below:

Full name:			
Street address:			
Suburb:	State:	Postcode:	
Home phone:			
Work phone:			
Mobile phone:			
Email address:			

A lot of money and staff time goes into just trying to locate participants for follow-up research studies. It would be appreciated if you could provide the name and contact details of one person who is not part of your immediate family and who will know your whereabouts in future years (and lives at a different address to you). We would only contact this person if another follow-up study is done in future and we can't locate you through other means. These details will be kept confidential.

Person's name:			
Relationship:			
Street address:			
Suburb:	State:	Postcode:	
Home phone:			
Work phone:			
Mobile phone:			
Email address:			

Participant ID:

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**LUNG FUNCTION QUESTIONNAIRE**

1. Have you had a cigarette (or any other tobacco product) in the last 24 hours?  No  Yes

If yes: How many hours ago was your last smoke?   Hours

(NB: if under one hour delay test until one hour – at least – has elapsed)

2. Have you used a puffer or inhaler in the last 24 hours?  No  Yes

If yes: What inhaler(s) did you use and how many hours ago was the last dose taken?

\_\_\_\_\_   Hours

\_\_\_\_\_   Hours

(NB: if taken under one hour delay test until one hour – at least – has elapsed)

3. Have you had a respiratory infection in the last 6 weeks?  No  Yes

If yes: How many days ago did it end?   Days

(NB: if currently infected delay test until participant is well)

4. Have you taken any medication for breathing (other than inhalers) in the last 24 hours?  No  Yes

If yes: Which medication(s) did you take and how many hours ago was the last dose taken?

\_\_\_\_\_   Hours

\_\_\_\_\_   Hours

5. Have you taken an antihistamine (any medication for allergy including hay fever) or cough medicine in the last 72 hours?  No  Yes

If yes: What medicine(s) did you use and how many hours ago was the last dose taken?

\_\_\_\_\_   Hours

\_\_\_\_\_   Hours

6. Have you taken any anti-depressants in the last month or hours?  No  Yes

If yes: What medicine(s) did you use and how many hours/day ago was the last dose taken?

\_\_\_\_\_   Hrs/Days

\_\_\_\_\_   Hrs/Days

7. How many hours ago did you have your last meal?   Hours

Participant ID:

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**\*\*\*\*NB: IF "YES" TO ANY OF QUESTIONS 8 through to 10  
DO NOT CARRY OUT METHACHOLINE CHALLENGE TESTING\*\*\*\***

8. Have you had a heart attack or stroke in the last 3 months?  
(If Yes, defer spirometry also for at least 3 months)  No  Yes

8a. Have you been diagnosed as having bronchiectasis  
(abnormal or permanent widening of the airways)?  No  Yes

9. Have you taken any medication for high blood pressure,  
a heart condition, epilepsy or used eye drops to treat glaucoma  
in the last 72 hours?  No  Yes

If yes: Which medication(s) did you take and how many hours ago was the last dose taken?

_____	<input type="text"/> <input type="text"/>	Hours
_____	<input type="text"/> <input type="text"/>	Hours
_____	<input type="text"/> <input type="text"/>	Hours
_____	<input type="text"/> <input type="text"/>	Hours

**NB: If any of the above medications are beta-blockers use Atrovent instead of Ventolin for BD challenge only (you must wait 30mins after administering Atrovent for post PD spirometry).**

9a. Do you snore loudly (louder than talking or can be heard through closed doors)?  No  Yes

9b. Do you often feel tired, fatigued, or sleepy during daytime?  No  Yes

9c. Has anyone observed you stop breathing during your sleep?  No  Yes

9d. Do you have or are you being treated for high blood pressure?  No  Yes

IF FEMALE:

10. Are you pregnant or breastfeeding?  
(If Yes, still able to carry out BD challenge only using Ventolin)  No  Yes

11. Have you had a menstrual period in the last 12 months?  No  Yes

IF Yes ☞ 11.1 What was the date of your last menstrual period  
(or if currently experiencing a period, the first day it began)? Date.....



Participant ID:

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**METHACHOLINE CHALLENGE**

20. CONTROL FEV<sub>1</sub> following inhalation of diluent:

20.1 Record 2 technically satisfactory manoeuvres within 150mls

Blow 1	Blow 2
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•	•
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20.2 Number of rejected attempts

21. Best CONTROL FEV<sub>1</sub> as a % of Baseline FEV<sub>1</sub> • %

([Control FEV<sub>1</sub>] / [Baseline FEV<sub>1</sub>] x 100)

21.1 Is this value less than 90% ?  No  Yes

IF YES ⇨ **STOP CHALLENGE & GO TO REVERSAL OF BRONCHOCONSTRICTION (PAGE 8)**

**OTHERWISE CONTINUE WITH METHACHOLINE CHALLENGE**

22. Does the participant have any of the following symptoms (Tick all that apply) :

- woken with tightness of chest in the last 12 months
- had an attack of shortness of breath during the day while at rest in the last 12 months
- been woken by an attack of shortness of breath in the last 12 months
- trouble with their breathing
- ever had asthma

IF YES to any of the above questions ⇨ Long protocol

22a. Will the long or short protocol be followed? long  short

After each dose, calculate the Post Mch FEV<sub>1</sub> as a % of the CONTROL FEV<sub>1</sub>  
 [Post Mch FEV<sub>1</sub>] / [Control FEV<sub>1</sub>] x 100

**During Short Protocol:**

- ⇨ **Change to Long Protocol** if Post Mch FEV<sub>1</sub> falls to 90% of Control FEV<sub>1</sub>
- ⇨ **Stop Methacholine Challenge** if Post Mch FEV<sub>1</sub> falls to ≤ 80% Control FEV<sub>1</sub>

**During Long Protocol:**

- ⇨ **Stop Methacholine Challenge** if Post Mch FEV<sub>1</sub> falls to ≤ 80% Control FEV<sub>1</sub>

<u>NOW RECORD</u>	90% of control FEV <sub>1</sub>	•
	80% of control FEV <sub>1</sub>	•

Participant ID:

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**METHACHOLINE CHALLENGE - continued**

**23. METHACHOLINE BATCH NUMBER**

(Refer to supplied pharmacy paperwork)

**SESSION NUMBER**

(Maximum of 6 sessions per batch of methacholine)

**ORDER IN SESSION (1 to 6)**

Dose Level	Cumulative dose (mg)	Inhalations		FEV <sub>1</sub>		No. rejected attempts
		SHORT	LONG			
1	0.0078	-	2	<input type="text"/> . <input type="text"/> <input type="text"/>	<input type="text"/> . <input type="text"/> <input type="text"/>	<input type="text"/>
2	0.0156	4	2	<input type="text"/> . <input type="text"/> <input type="text"/>	<input type="text"/> . <input type="text"/> <input type="text"/>	<input type="text"/>
3	0.0312	-	1	<input type="text"/> . <input type="text"/> <input type="text"/>	<input type="text"/> . <input type="text"/> <input type="text"/>	<input type="text"/>
4	0.0625	3	2	<input type="text"/> . <input type="text"/> <input type="text"/>	<input type="text"/> . <input type="text"/> <input type="text"/>	<input type="text"/>
5	0.125	-	1	<input type="text"/> . <input type="text"/> <input type="text"/>	<input type="text"/> . <input type="text"/> <input type="text"/>	<input type="text"/>
6	0.25	3	2	<input type="text"/> . <input type="text"/> <input type="text"/>	<input type="text"/> . <input type="text"/> <input type="text"/>	<input type="text"/>
7	0.5	-	1	<input type="text"/> . <input type="text"/> <input type="text"/>	<input type="text"/> . <input type="text"/> <input type="text"/>	<input type="text"/>
8	1.0	3	2	<input type="text"/> . <input type="text"/> <input type="text"/>	<input type="text"/> . <input type="text"/> <input type="text"/>	<input type="text"/>
9	2.0	4	4	<input type="text"/> . <input type="text"/> <input type="text"/>	<input type="text"/> . <input type="text"/> <input type="text"/>	<input type="text"/>

Participant ID:

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**METHACHOLINE CHALLENGE - continued**

- |            |  |          |
|------------|--|----------|
| <b>24.</b> | Why was methacholine challenge stopped?                  | TICK BOX |
|            | a) end of test reached (cumulative dose of 2mgs inhaled) | 1        |
|            | b) 20% fall in FEV <sub>1</sub> achieved                 | 2        |
|            | c) participant's technique not satisfactory              | 3        |
|            | d) participant asked to stop                             | 4        |
|            | e) other (specify) _____                                 | 5        |

**REVERSAL OF BRONCHOCONSTRICTION**

- 25.** Record the first 2 technically satisfactory maneuvers
- |                      | Best attempt 1 | Best attempt 2 |
|----------------------|----------------|----------------|
| FVC(L)               | •              | •              |
| FEV <sub>1</sub> (L) | •              | •              |
| PEF(L/s)             | •              | •              |

**25.1** Number of rejected attempts

- 26.** Best POST-BRONCHODILATOR FEV<sub>1</sub> as % of BASELINE FEV<sub>1</sub>      •    %
- NO    YES

**27.** Has the subject's FEV<sub>1</sub> returned to within 10% of baseline measurement?

**Ensure subject's lung function is within 10% of baseline measurement before he/she leaves the testing centre**



Participant ID:

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**BRONCHODILATOR CHALLENGE**

28. Record the first 2 technically satisfactory maneuvers

	Best attempt 1	Best attempt 2
FVC(L)	•	•
FEV <sub>1</sub> (L)	•	•
PEF(L/s)	•	•

28.1 Number of rejected attempts

**CHECK LIST**

29.1 Consent  No  Yes

29.2 Dietary fat questionnaire collected  No  Yes

29.3 Lung Function measures collected :

EBC measurement	<input type="checkbox"/>
VD measurements	<input type="checkbox"/>
Spirometry	<input type="checkbox"/>
Methacholine Challenge	<input type="checkbox"/>
Bronchodilator Challenge	<input type="checkbox"/>

29.4 Biological specimens collected :

Full Bloods	<input type="checkbox"/>
Part Bloods	<input type="checkbox"/>
Saliva	<input type="checkbox"/>
No sample	<input type="checkbox"/>

29.5 Information about TAHS Breast Density Study given to participant  No  Yes  N/A

29.6 Sleep questionnaire collected  No  Yes