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PARTICIPANT INFORMATION AND CONSENT FORM

FAH018178

Site: Austin Health
Version: 3
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Study title: Muscle effects of replacement and withdrawal of testosterone in men.

Principal Researcher: Dr Mathis Grossmann

Associate Researchers: Prof Jeffrey D. Zajac, Prof Marcus Pandy, Dr Ada Cheung, Dr Helen MacLean, Prof Ego Seeman, A/Prof Damien Bolton and Dr Daryl Lim-Joon

1. Introduction

You are invited to take part in this research project. The research project is aiming to more fully understand how testosterone levels affect muscle strength and muscle function.

This Participant Information and Consent Form tells you about the research project. It explains the procedures involved. Knowing what is involved will help you decide if you want to take part in the research.

Please read this information carefully. Ask questions about anything that you don't understand or want to know more about. Before deciding whether or not to take part, you might want to talk about it with a relative, friend or healthcare worker.

Participation in this research is voluntary. If you don't wish to take part, you don't have to. You will receive the best possible care whether you take part or not.

If you decide you want to take part in the research project, you will be asked to sign the consent section. By signing it you are telling us that you:

- understand what you have read;
- consent to take part in the research project;
- consent to participate in the research processes that are described;
- consent to the use of your personal and health information as described.

You will be given a copy of this Participant Information and Consent Form to keep.

2. What is the purpose of this research project?

Male sex hormone or testosterone is an essential hormone in muscle, bone and fat in male humans. Low testosterone levels decrease well-being and contribute to muscle weakness, bone fragility and weight gain however the way testosterone changes produce these effects are not well characterised. This research study is investigating the effects of testosterone on muscle. Cutting-edge technology will be used to help explain how low testosterone levels may relate to negative effects on muscle function. Given the importance of ageing and frailty, understanding the role of testosterone in these conditions may have major implications for prevention and treatment.

The aim of this clinical research study is to more fully understand how testosterone replacement (a rise in testosterone levels) or testosterone withdrawal (a fall in testosterone levels) affects muscle function and muscle strength. Muscle function is important in performing daily activities and contributes to an individual's strength, well-being and quality of life.

Four groups of men will be invited to participate:

Group 1 will be men with low testosterone levels who require testosterone replacement therapy. These men will have a rise from low to normal testosterone levels.

Group 2 will be men with early prostate cancer (i.e. prostate cancer that has not spread to distant organs) receiving androgen deprivation therapy (testosterone withdrawal) and will hence have a fall from normal to low testosterone levels.

Group 3 will be men who have normal testosterone levels and have similar age and weight characteristics as the men in group 1. This group of men will act as a comparison (a control group) to the men in group 1.

Group 4 will be men with early prostate cancer who do not require treatment with androgen deprivation therapy. This group of men will act as a comparison (a control group) to the men in group 2.

We aim to recruit approximately 45 men in each of the four groups.

This research study will involve collaboration between researchers at Austin Health and in the Department of Mechanical Engineering at The University of Melbourne. This study has been initiated by Dr Mathis Grossmann and Professor Jeffrey D. Zajac. The results of this research may be used to help a researcher (Dr Ada Cheung) to obtain a higher degree (Doctor of Philosophy).

This research has been funded by the National Health and Medical Research Council of Australia (NHMRC).

3. What does participation in this research project involve?

The flow diagram on the next page lists what is required each time you have an assessment. You will need to have an assessment three times during the 12 month study.

Participation in the study will involve assessment at baseline, and after 6 and 12 months. Each assessment will take approximately 3 hours of your time at Austin Health (Heidelberg Repatriation Hospital) and will involve the following:

a) Medical history and a questionnaire to assess your weight, physical activity and frailty.

b) Measurement of the time it takes you to walk 4 metres.

c) Measurement of your hand grip strength.

d) When undergoing blood tests as part of your routine care, an additional tube of blood (7.5mL, approximately 1½ teaspoons) will be taken for storage in case any blood tests need to be repeated. This will be stored for 7 years and may be used in other related studies or future research that is approved by the Austin Health Human Research Ethics Committee.

e) MRI of your legs – is a safe, painless test using a magnetic field to obtain images. A safety checklist will need to be completed prior to scanning to ensure no metal is brought into the MRI room. This will be performed at Austin Health and will take approximately 30 minutes of your time.

In addition, each assessment at baseline, 6 and 12 months will also involve an assessment of your walking and movement in a cutting-edge computerised video-based facility at the Human Movement Laboratory, Mechanical Engineering, The University of Melbourne, Grattan Street, Parkville, Victoria. This session will last approximately 3 hours and could be performed on the same day as the Austin tests or on an alternate day. This will use the information obtained from the MRI of your legs to create a computerised model. Measurements of your leg length, height, weight, hip width, knee width and ankle width will be performed. Muscle surface electrodes will be applied to the skin to detect activity from several muscles in your legs. There will be plates embedded in the walkway to detect how much force is applied to the ground you walk on. This information will then allow monitoring of the function and movement of each muscle in your leg. You will be asked to perform some exercise tasks (each task will be repeated 5 times) such as walking at your preferred speed, stepping on and off a platform, or standing from a sitting position in a chair.

You may be invited to participate in an optional component of the study involving a needle muscle biopsy for which a separate consent will need to be signed.

Study Outline

Month of Study	Assessment at Austin Health	Imaging Studies at Austin Health	Assessment at Human Movement Laboratory (Parkville)
0	History Time to walk 4 metres Hand grip strength Blood test	MRI legs (leg muscles)	Walking & Movement Tests
6	History Time to walk 4 metres Hand grip strength Blood test	MRI legs (leg muscles)	Walking & Movement Tests
12	History Time to walk 4 metres Hand grip strength Blood test	MRI legs (leg muscles)	Walking & Movement Tests

You will not be paid for your participation in this study. Parking costs incurred at Austin Health and The University of Melbourne as a result of your participation in this study will be reimbursed to you on production of a receipt.

4. What will happen to my test samples?

Blood test samples and copies of your imaging will be stored at Austin Health and The University of Melbourne. Blood test samples will be stored in a locked area in the pathology or endocrinology laboratory and your imaging will be stored in locked filing cabinets at Austin Health and The University of Melbourne. Your name and personal details will be removed from all samples and replaced with a code.

5. What are the possible benefits?

This is a research study and therefore you are not expected to benefit from your participation in this study. Results from the study will clarify interactions of testosterone on muscle which has potential impact on multiple facets of men's health.

Whilst participation has no direct medical consequences, the information from the study may lead to an individual's review of life-style factors, for example dietary or exercise levels.

6. What are the possible risks?

Possible risks associated with the assessments include

a) MRI scan – there is no radiation involved with MRI but this safe, painless test requires you to lie still for approximately 30 minutes. As the MRI is a narrow tunnel, some participants may feel claustrophobic.

b) Walking and movement tests – These are safe and supervised. Handrails will be provided for some movement tasks to offer additional support to participants who need it.

There may be additional unforeseen or unknown risks.

7. What if new information arises during this research project?

During the research project, new information about the risks and benefits of the project may become known to the researchers. If this occurs, you will be told about this new information and the researcher will discuss whether this new information affects you.

8. Can I have other treatments during this research project?

It is important to tell your doctor and the research staff about any treatments or medications you may be taking, including over-the-counter medications, vitamins or herbal remedies, acupuncture or other alternative treatments. You should also tell your doctor about any changes to these during your participation in the research.

9. Are there alternatives to participation?

Your participation in this study is entirely voluntary. If you do not wish to take part you don't have to and your decision will not impact on routine medical care.

10. Do I have to take part in this research project?

Participation in any research project is voluntary. If you do not wish to take part you don't have to. If you decide to take part and later change your mind, you are free to withdraw from the study at any stage.

Your decision whether to take part or not to take part, or to take part and then withdraw, will not affect your routine treatment or your relationship with those treating you or your relationship with Austin Health. Before you make your decision, a member of the research team will be available so that you can ask any questions you have about the research study. You can ask for any information you want. Sign the Consent Form only after you have had a chance to ask your questions and have received satisfactory answers.

11. What if I withdraw from this research project?

If you decide to withdraw from this study, please notify a member of the research team before you withdraw. This notice will allow that person or the research supervisor to inform you if there are any special requirements linked to withdrawing.

If you decide to leave the project, the researchers would like to keep the personal and health information about you and your test results that have been collected. This is to help them make sure that the results of the research can be measured properly. If you do not want them to do this, you must tell them before you join the research project.

The study doctor may remove you from this study for any reason without your consent.

You may be taken out of the study if:
1. Staying in the study would be harmful to you.
2. You need treatment that is not allowed in this study.
3. You fail to follow instructions (these are usually for your own safety).

12. Could this research project be stopped unexpectedly?

It is not expected that this research project will be stopped unexpectedly unless performance of the assessments are not feasible.

13. How will I be informed of the results of this research project?

The results of this study may be published in academic journals. You will not be identified in these publications. The research staff can let you know the results of the study when they are available.

14. What else do I need to know?

- **What will happen to information about me?**

Any information obtained in connection with this study and information that can identify you will remain confidential. It will only be disclosed with your permission, except as required by law.

In any publication, information will be provided in such a way that you cannot be identified. It is desirable that your family doctor be advised of your decision to participate in this research study. In addition, researchers will require access to your medical records.

If you give us your permission by signing the Consent Form, you agree to researchers gaining access to your confidential medical records from any hospital or treating doctor, and your family doctor being notified of your decision to participate in this study. Information about your participation in this research project may be recorded in your health records.

The information obtained in this study will be stored in a locked filing cabinet within a locked office located in the Department of Medicine at Austin Health. Your information will be stored in a folder which will be coded and re-identifiable, and the code will be locked in

a filing cabinet. Electronic information will be stored on a password protected computer system, stored within a locked office at the Department of Medicine, Austin Health. Your data will be stored for seven years following the completion of this study. The principal and associated researchers named at the end of this document are the only persons who will have access to the stored information.

The information gained in this study may also be used, in a coded manner, for a researcher to gain a higher degree (MD or PhD).

Any abnormal results that may be of relevance for your health will be discussed with you and, provided you consent, will be forwarded to your treating doctor.

- **How can I access my information?**

In accordance with relevant Australian and/or Victorian privacy and other relevant laws, you have the right to access the information collected and stored by the researchers about you. You also have the right to request that any information, with which you disagree, be corrected. Please contact one of the researchers named at the end of this document if you would like to access your information.

- **What happens if I am injured as a result of participating in this research project?**

If you suffer an injury as a result of participating in this research project, hospital care and treatment will be provided by the public health service at no extra cost to you if you elect to be treated as a public patient.

- **Is this research project approved?**

The ethical aspects of this research project have been approved by the Human Research Ethics Committee of Austin Health.

This project will be carried out according to the National Statement on Ethical Conduct in Human Research (2007) produced by the National Health and Medical Research Council of Australia. This statement has been developed to protect the interests of people who agree to participate in human research studies.

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15. Consent

I have read, or have had read to me in a language that I understand, this document and I understand the purposes, procedures and risks of this research project as described within I give permission for my doctors, other health professionals, hospitals or laboratories outside this hospital to release information to Austin Health concerning my disease and treatment that is needed for this project. I understand that such information will remain confidential.

I have had an opportunity to ask questions and I am satisfied with the answers I have received.

I freely agree to participate in this research project as described. I understand that I will be given a signed copy of this document to keep.

Participant's name (printed) ……

Signature Date

Name of witness to participant's signature (printed) ……

Signature Date

Declaration by researcher*: I have given a verbal explanation of the research project, its procedures and risks and I believe that the participant has understood that explanation.

Researcher's name (printed) ……

Signature Date

** A senior member of the research team must provide the explanation and provision of information concerning the research project.*

Note: All parties signing the consent section must date their own signature.

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I consent to the storage and use of blood and tissue samples taken from me for use in:

- ☐ this specific research project
- ☐ other research that is closely related to this research project
- ☐ any future research

as described in Section 4.

Participant's name (printed) ……

Signature Date

Name of witness to participant's signature (printed) ……

Signature Date

Declaration by researcher*: I have given a verbal explanation of the research project, its procedures and risks and I believe that the participant has understood that explanation.

Researcher's name (printed) ……

Signature Date

** A senior member of the research team must provide the explanation and provision of information concerning the research project.*

Note: All parties signing the consent section must date their own signature.

16. Who can I contact?

If you require further information or if you have any problems concerning this study (for example, any side effects), you can contact Dr Mathis Grossmann, Professor Jeffrey Zajac, or Dr Ada Cheung at the Department of Medicine, Austin Health Phone 9496-5000.

If you have any complaints about any aspect of the study, the way it is being conducted or any questions about your rights as a research participant, then you may contact

Name: Ms Jill Davis

Position: Manager, Research Ethics Unit, Austin Health

Telephone: 9496-4034

You will need to tell Ms Davis the name of one of the researchers.