



# Hauora Tāhine

Pathways to Transgender Healthcare Services



## Guidelines for Gender Affirming Healthcare for Gender Diverse and Transgender Children, Young People and Adults

**Developed with support from**  
Northern Region Clinical and Consumer Advisory Group

Authored by: Dr Jeannie Oliphant

### Endorsed by

Dr Michael Roberts, Chief Medical Officer, Northland DHB

Dr Andrew Brant, Chief Medical Officer, Waitemata DHB

Dr Margaret Wilsher, Chief Medical Officer, Auckland DHB

Dr Gloria Johnson, Chief Medical Officer, Counties Manukau DHB

October 2018

## Contents

Acknowledgements.....	3
Terminology .....	4
Introduction .....	6
Transition goals .....	7
Informed consent.....	7
General healthcare .....	8
Healthcare for young people .....	8
Fertility preservation and contraception .....	9
Puberty suppression using GnRH agonists.....	10
Gender affirming hormone treatment .....	12
Feminising hormonal therapy .....	14
Masculinising hormonal therapy .....	16
Gender affirming surgical treatment .....	19
Laser hair removal.....	20
Voice and communication training.....	20
References .....	21
Appendix A - Tanner stages .....	22
Appendix B - Fertility preservation information for those starting oestrogen.....	23
Appendix C – Consent forms.....	24



## Acknowledgements

**Author: Dr Jeannie Oliphant, Transgender Health Clinical Lead, Northern Region**

*Sept 2016 – August 2018*

Dr Michael Roberts, Dr Andrew Brant, Dr Margret Whilsher and Dr Gloria Johnson as Chief Medical Officers for the Northern Region DHBs; alongside members of the Northern Region Clinical and Consumer Advisory Group; as well as Ruth Bijl, Lorraine Bailey and Duncan Matthews from Planning, Funding and Outcomes for Auckland and Waitemata DHBs; would like to acknowledge Dr Jeannie Oliphant for her significant contribution to the improvement of the health and wellbeing of gender diverse and transgender people through the authoring of these guidelines.

### **Dame Naida Glavish ONZM, JP**

The Northern Region Clinical and Consumer Advisory Group would like to acknowledge the generous support of Dame Naida Glavish ONZM, JP, Chief Advisor Tikanga Māori Health , He Kāmaka Waiora, Waitematā, Auckland and Counties Manukau DHBs for her gifting of the phrase *Iranga tukuwai* to describe the revealing of one's inner gender identity.



## Terminology

### Gender identity

A person's concept of their self as male, female, a blend of both or neither. Gender identity can be the same as, or different to, the sex assigned at birth.

### Gender expression

The external presentation of one's gender. This can be expressed through one's name, clothing, behaviour, hairstyle, voice or any other way. A person's gender expression may or may not conform to socially defined behaviours and characteristics typically associated with being either solely masculine or feminine.

### Gender diverse

A term to describe people who do not conform to their society or culture's expectations for males and females. Being transgender can be one way of being gender diverse, but not all gender diverse people identify as being transgender and *vice versa*. Gender creative or gender expansive are other similar terms that are used when referring to children.

### Assigned male at birth

A person who was thought to be male when born and initially raised as a boy.

### Assigned female at birth

A person who was thought to be female when born and initially raised as a girl.

### Trans or transgender

A term for someone whose gender identity does not align with their sex assigned at birth. This term is often used as an umbrella term, recognising that people may describe themselves in many ways including the use of indigenous terms such as; whakawāhine, tangata ira tāne, tāhine (Māori), mähū (Hawai'i and Tahiti), vakasalewalewa (Fiji), palo- pa (Papua New Guinea), fa'afafine (Samoa), akava'ine (Rarotonga), fakaleiti or leiti (Tonga), fakafifine (Niue).

### Cis or cisgender

A term for someone whose gender identity aligns with their sex assigned at birth.

### Trans boy/male/man

A term to describe someone, assigned female at birth, who identifies as a boy/male/man.

### Transmasculine

A term to describe the spectrum of transmasculinity that includes binary identified trans men and also transmasculine people who do not identify as binary men.

### Trans girl/female/woman

A term to describe someone, assigned male at birth, who identifies as a girl/female/woman.

### Transfeminine

A term to describe the spectrum of transfemininity that includes binary identified trans women and also transfeminine people who do not identify as binary women.



**Transsexual**

A term for people who transition from one sex to another. A person assigned male at birth can become recognisably female through the use of hormones and surgical procedures; and a person assigned female can become recognisably male. Transsexual is often considered a subset of transgender, however some transsexual people reject the label transgender.

**Non-binary**

A term to describe someone who doesn't identify exclusively as a man or a woman. There are many different ways that people may be non-binary male or female.

**Gender fluid**

A person whose gender identity varies over time.

**Agender**

A term to describe someone who doesn't identify with any gender.

**Gender dysphoria**

A term that describes the distress experienced by a person due to the incongruence between their gender identity and their sex assigned at birth.

**Social transition**

The process by which a person changes their gender expression in social situations to better align with their gender identity.

**Gender affirming healthcare**

Healthcare that is respectful and affirming of a person's unique sense of gender and provides support to identify and facilitate gender healthcare goals. These goals may include supporting exploration of gender expression, support around social transition, hormone and/or surgical interventions. This may also involve providing support to whānau, caregivers or other significant supporting people.

**Pronoun**

A word used in place of a noun (or name). These are third person pronouns, and in English pronouns include: he/him, she/her or they/them. Other gender neutral pronouns in use include ze and hir.

**Children, young people and adults**

For the purposes of this guideline: those aged up to 11 years are considered children; those aged from 12 to 24 years are considered to be young people; those aged 25 years and older are considered to be adults.



## Introduction

“Hauora Tāhine - Pathways to Transgender Healthcare Services” is the name given to the collective services across the Auckland region. Hauora tāhine, means transgender health and contains a new word in the Māori language: tāhine.

At the Hui Takatāpui in November 2016, a group of Māori transgender women met to discuss language. Hira Huata noted “the word tāhine came out of my mouth as we were exploring other words that we feel describes us and we feel we have an affinity to...we together decided that the word tāhine empowers us.”<sup>1</sup> The word tāhine, meaning transgender, has received mana through its use by those who live daily as tāhine, those who walk the talk and named that walk.

The use of the word, tāhine, has been endorsed by Te Taura Whiri i te Reo Māori, Māori Language Commission<sup>2</sup> and Dame Naida Glavish ONZM, JP, Chief Advisor Tikanga Māori Health, He Kāmaka Waiora, Waitematā, Auckland and Counties Manukau DHBs.<sup>3</sup>

The name Hauora Tāhine was gifted to the Northern Region Transgender Clinical and Consumer Advisory Group in 2017 by Shannon Anahera White, a member of the advisory group, to provide an identity for secondary health services providing specialist gender affirming healthcare across Auckland.

Many Māori who identify as transgender also identify as takatāpui. Takatāpui, is a traditional Māori word, meaning ‘intimate companion of the same sex’<sup>4</sup> that is being used to more broadly encompass everyone under the LGBTQI umbrella. Other words, drawing on traditional Māori concepts, such as whakawāhine and tangata ira tāne, have been created to more specifically describe being transfeminine and transmasculine. Different people feel comfortable with different words or may use a range of words depending on their context.



## Transition goals

Physical health is part of every person's wellbeing and is therefore relevant to every person's transition. Medical treatments such as hormone therapies and surgical interventions may also be an important part of a person's transition and physical health. While many trans people will benefit from hormone therapies and surgical interventions, some may choose only one of these options and others may decide to have neither.<sup>5</sup> For those who are seeking medical support, access to competent care through an informed consent model is of paramount importance.

In regards to transition goals, it is important to recognise that each person will articulate these differently. It is not helpful to assume that everyone wants to conform to binary gender norms and clinicians need to be aware not to impose a binary view of gender.<sup>6</sup> The importance of discussing individual transition goals and individualising treatment options is especially true for non-binary people but also applies to those with a more binary gender.<sup>5</sup>

Avoiding harm is a fundamental ethical consideration for health professionals when considering healthcare. Withholding gender affirming treatment is not considered a neutral option, as this may cause or exacerbate any gender dysphoria or mental health problems. Conversely, access to gender affirming care may reduce the mental health pressures a trans or gender diverse person is experiencing. This does not discount that clinical decisions can be complex; particularly where there is family opposition for young people, the person is neurodiverse or has complex mental health needs. It is best practice that gender affirming healthcare is provided by well-resourced multidisciplinary teams that include mental health professionals<sup>4</sup> and have good links with peer support groups. In complex scenarios case discussion helps to achieve the best outcomes for the patient and helps clinicians to feel supported.

## Informed consent

Utilising an informed consent process involves several conversations between the person and clinician(s) before they start treatments that have an irreversible component to increase certainty that they are adequately prepared and are making a fully informed decision. Health teams have a duty to approach care holistically. Involving team members with expertise in psychological health is important to identify and address any mental health needs. Social transition can be a stressful time for some people who may benefit from extra mental health support, but it is important to ensure that they consent to having this support and it is not enforced as a requirement for accessing gender affirming care.

Accessible gender affirming care involves people being able to access this care as close to home as possible. There are limited numbers of teams that are specialised in gender affirming care in New Zealand and these are receiving increasing demand.<sup>7</sup> Primary health providers should be aware of the barriers and potential harms with requiring people to travel or wait to access care and might consider assessment and provision of gender affirming hormones within the primary care setting.



## General healthcare

Access to primary and secondary health care services that are supportive of gender diversity is fundamental to the provision of good healthcare. Apart from transition related health needs, transgender people experience the same health needs as other people. Those who have not undergone surgical removal of their breasts, cervix, uterus, ovaries, prostate or testicles remain at risk of cancer in these organs and should undergo screening as recommended for these cancers. It is important to be aware that this needs to be managed carefully by primary care health teams, as many gender diverse people find cancer screening extremely challenging, both physically and emotionally.

With regard to cervical screening for trans men consider:

- Asking what words are preferred when referring to their body parts.
- Use of internal oestrogen cream prior may reduce discomfort and reduce the chance of an inadequate smear test.

With regard to breast screening for trans women:

- Regular mammograms as per the national breast screening programme are recommended.

## Healthcare for young people

Health services providing gender affirming health care for transgender young people need to be mindful of the needs of young people in general.

### Practice point – Young People

- Acknowledge that withholding gender affirming healthcare is not considered a neutral option.
- Arrange the consultation so that all young people can be seen on their own, for at least part of the consultation, and include a discussion around confidentiality. This needs to be routine practice to ensure that young people have the opportunity to voice their gender related concerns to their health professional in private.
- Recognise that some transgender young people may not have the support of their parents/guardians, but this should not preclude them from receiving support and care.
- Refer promptly to appropriate services to access early interventions pre/during puberty, as timeliness is particularly important in relation to long-term outcomes.
- Assess young people routinely for risks around abuse, bullying, drug and alcohol risk taking, sexual health and mental health concerns. Provide links to appropriate mental health or other services as needed.





## Fertility preservation and contraception

Fertility preservation should be discussed, prior to starting puberty suppression or gender affirming hormone therapy.<sup>8</sup> Gonadotropin Releasing Hormones (GnRH) agonists are reversible and should not affect long term fertility. However, prior to starting gender affirming hormone therapy, adolescents are often reluctant to cease puberty blockers in order to conduct fertility preserving interventions.<sup>5</sup> For younger adolescents a focus on preservation of gametes rather than a discussion on desire for future fertility may be more developmentally appropriate. Be aware that some whānau might feel a strong sense of loss if there is no possibility of having mokopuna/grandchildren. The need to protect and preserve lineage or whakapapa may be important for some.

There are many reports of trans men having successful pregnancy outcomes for those who have ceased testosterone for the purposes of achieving conception.<sup>9</sup> However it is unknown what effect the duration of testosterone therapy has on ovarian function.

It is important that contraception advice is provided, prior to starting testosterone. Testosterone therapy does not provide a guarantee of adequate contraception and is contraindicated in pregnancy because of potential harm to the foetus from the androgenising effects of treatment.<sup>10</sup> Progesterone based Long Acting Reversible Contraception (LARCs) such as (Depo provera®, Jadelle®) or IUDs (Mirena®)/ IUCDs are suitable options for contraception, while condoms provide additional protection against the acquisition of sexually transmitted infections. Note that insertion of an IUD may be more painful and technically more challenging in someone who has a degree of cervical atrophy from testosterone therapy.

For those considering taking feminising hormones who have reached at least Tanner stage 3 ([Appendix A](#)), it is recommended that cryopreservation of sperm be considered.<sup>8</sup> For those in early adolescence (Tanner stage 2-3), collection of mature sperm will not usually be possible as mature sperm are produced from mid puberty (Tanner stage 3-4).<sup>5</sup> [Appendix B](#) provides an example of fertility information that might be provided for those starting feminising hormones.

For those considering taking masculinising hormones, the option of egg or ovarian tissue storage should be discussed, recognising however, that this does involve invasive procedures that are not currently publically funded unless reproductive organs are being removed (hysterectomy/oophorectomy). There is no current evidence to suggest that testosterone exposure affects the likelihood of future healthy egg harvesting.



## Puberty suppression using GnRH agonists

Health teams need to be aware of the positive impact of puberty blockers (GnRH agonists) on future well-being. Be mindful of the need to refer promptly and be aware of referral pathways. Puberty blockers can be prescribed from Tanner stage 2 to suppress the development of secondary sex characteristics, although are still beneficial when prescribed later in puberty to prevent on-going masculinisation/feminisation.<sup>8</sup>

Puberty blockers are considered to be fully reversible and allow the adolescent time prior to making a decision on starting hormone therapy.<sup>8</sup> They do not stop growth or weight gain, and monitoring of height is recommended as adult height may potentially be increased if prolonged puberty suppression delays epiphyseal fusing.<sup>8</sup> A bone age may be helpful to assess whether epiphyseal closure has occurred when considering what rate of hormonal induction to use as this may potentially impact on final height.

Puberty blockers halt the continuing development of secondary sexual characteristics, such as breast growth or voice deepening, and relieve distress associated with these bodily changes for trans young people.<sup>11</sup> For trans women and transfeminine people, they will prevent further masculinisation of the face and body that typically occurs into early adulthood.<sup>5</sup> For trans men and transmasculine people, the puberty blockers will induce amenorrhoea, reducing distress associated with menstruation, although other options for this are also available. If required the addition of non-hormonal contraception should be discussed.

Currently in New Zealand, goserelin (Zoladex®) SC implants have sole subsidy status, although leuporelin (Lucrin®) IM injections continue to be fully funded for children and adolescents, who are unable to tolerate administration of goserelin, where the prescription is endorsed accordingly.<sup>12</sup>

Consideration should also be given to those in early adolescence who may desire genital gender affirming surgery in adulthood. For trans women and transfeminine people, puberty suppression at Tanner stage 2-3 may limit the availability of penile and scrotal skin used to create a neovagina and labia.<sup>13</sup> This needs to be balanced with the desire to avoid voice deepening and other secondary sexual characteristics which will progress if continuing past Tanner stage 2-3.

There is some concern regarding the long term impact of puberty suppression on bone mineral density.<sup>8</sup> It is advisable to encourage young people on puberty blockers to have an adequate calcium intake, provide vitamin D supplementation where needed and encourage weight bearing exercise.<sup>5</sup> For those requiring a prolonged period on puberty blockers or who have other significant additional factors for reduced bone density, a DEXA scan to monitor bone densitometry should be considered.

Puberty blockers should be continued until a decision is made regarding further treatment options including: starting other anti-androgen agents or accessing orchiectomy or other surgical options for trans women and transfeminine people; starting testosterone for trans men and transmasculine people.



**Table 1 Puberty blockers. See [Appendix C](#) for sample puberty blocker consent forms.**

Medication	Dose
GnRH agonist options	
Leuprorelin (Lucrin®)	11.25 mg IM every 12 weeks*
Goserelin (Zoladex®)	10.8 mg SC implant insertion into lower abdomen every 12 weeks*

*\*If evidence of insufficient pubertal suppression e.g. LH > 2 IU/L, pubertal progression, continued menses the interval between GnRH blockers can be shortened to 10 weeks or the dose increased.*

**Table 2 Recommended medical examination and investigations during suppression of puberty**

Examination	Every 3-6 months: height, weight, consider sitting height, BP, Tanner stage to ensure complete suppression
Blood tests	Every 6-12 months: LH, oestradiol or testosterone Consider Vitamin D levels/or treat
X rays	Bone age on left hand if clinically indicated
If major risk factors for osteoporotic # or prolonged time on puberty blockers	Consider bone density scan (DEXA)*

*\* Unless concerns around bone mineral density then regular monitoring of bone density is not routinely done in NZ.*



## Gender affirming hormone treatment

Gender affirming hormones oestrogen and testosterone are used to either feminise or masculinise a person's appearance by inducing onset of secondary sexual characteristics of the appropriate gender. Some of the effects of these medications are irreversible, whilst others have a degree of expected reversibility.<sup>5</sup>

WPATH SOC v7 guidelines provide internationally recognised standards and criteria for accessing gender affirming hormone treatment.<sup>14</sup>

WPATH SOC v7 criteria for access to gender affirming hormone treatment:

- Persistent, well-documented gender dysphoria;
- Capacity to make a fully informed decision and to consent for treatment;
- Age of majority;
- If significant medical or mental health concerns are present, they must be reasonably well controlled.

In New Zealand young people aged 16 years and older are considered to be able to consent to medical care (Care of Children Act 2004), however it is increasingly recognised that there may be compelling reasons to initiate hormones prior to the age of 16 years for some individuals, although there is as yet little published evidence to support this.<sup>8</sup> Consideration should be given to the individual circumstances including family support, length of time on blockers, concerns around final height, risks of delaying hormones and most importantly the ability to consent. Further discussion around fertility should be carried out prior to hormone initiation. Using a multidisciplinary team approach to support initiation of hormones is recommended for all young people.

It is important when commencing hormones in younger adolescents to consider the Induction of Puberty Protocol as detailed by Humberg et al,<sup>8</sup> to ensure maximal ongoing growth. For trans men within two years of menarche who may have further growth potential, the gradual increase in testosterone doses described may be beneficial to increase final height. Conversely, for trans women in later puberty, who are still growing, earlier oestrogen commencement on standard doses will support epiphyseal closure in those wishing to reduce final predicted height.

When commencing testosterone, continuation of the GnRH agonist is recommended until the full dose of testosterone is reached, to help prevent breakthrough menses (bleeding). If breakthrough bleeding occurs once on full dose testosterone alone a progesterone may need to be added.

There is no upper age limit to starting hormone therapy. Provide information based on an individual risk assessment and discussion on likely benefits to guide an informed consent process highlighting those body changes that are considered permanent.

Drug Free Sport NZ has information for clinicians who are asked to provide documentation for trans athletes applying for therapeutic use exemptions for any substance on the prohibited list. This list which is



decided by the World Anti-Doping Agency currently includes testosterone, spironolactone and also GnRH agonists but only for those competing in a male sports category.

The WPATH standards emphasise that having medical or mental health concerns does not mean gender affirming care cannot be commenced, rather that these need to be responded to alongside gender affirming care. According to the standards, this readiness can be assessed by a prescribing provider or mental health professional who is experienced and competent at working with trans people.<sup>14</sup>

Prior to starting hormone therapy, it is important to evaluate and address any medical conditions that could be exacerbated by treatment with sex hormones of the affirmed gender.<sup>8</sup> The following medical conditions are not necessarily contra indications to starting hormone therapy but may need to be considered.

Consider:

- Current or recent smoker
- Heart failure, cerebrovascular disease, coronary artery disease, atrial fibrillation
- History or family history of venous thromboembolism including deep vein thrombosis (DVT)
- Cardiovascular risk factors – Body mass index (BMI) > 30, hyperlipidaemia, hypertension
- Migraine
- History of hormone-sensitive cancers e.g., breast, prostate, uterine, testicular
- Possible drug interactions
- Sleep apnoea
- Sex variations for some intersex people

**Note:** while discussion on intersex is outside the limits of this guideline it is important to acknowledge that some intersex people may present as gender diverse and that there are unique considerations for this group of people.

The prescribing and monitoring of maintenance hormonal therapy is best done in primary care as part of the patient's overall care. Consultations should include:

- Assessment of the effects of taking hormones on both physical and emotional health
- Review of doses and desire for change
- Presence of side effects
- Assessment of mental health and body image
- Current social supports or issues
- Enquiry about lifestyle factors such as nutrition, exercise and smoking
- Monitoring of blood pressure and BMI



## Feminising hormonal therapy

Oestradiol valerate can be started in conjunction with an anti-androgen agent or added to a GnRH agonist (leuporelin/goserelin). Goserelin (Zoladex®) is an option for those trans women, transfeminine, and/or non-binary people who cannot tolerate oral anti-androgen agents. Anti-androgen agents are no longer required if orchiectomy or genital gender reassignment surgery is performed.

Start a low dose of oestradiol valerate (Progynova®/Estradot®) and increase the dose every 6 months approximately depending on the clinical effect. Transdermal oestrogen has lower risks for thromboembolism than oral oestrogen and should be considered, particularly for those aged > 40 years, with raised BMI or any other increased risks for thromboembolism.

**Table 3 Recommended medical examination and investigations prior to starting feminising hormones**

Physical Examination	Investigations
Blood pressure	Electrolytes - if starting spironolactone
Height	HbA1c - if risk factors suggest indicated
Weight	Lipids – if risk factors suggest indicated
BMI	Prolactin
Tanner stage (in adolescents)	LH
	Testosterone level
	Oestradiol level

**Table 4 Feminising hormones. See [Appendix C](#) for example consent form.**

Medication	Dose (Adults and older adolescents)
Anti-androgen agent options (not required post gonadectomy)	
Cyproterone	Starting dose: 25-50 mg po daily Usual maintenance dose: 25-50 mg po daily, although smaller doses (12.5 mg) may be effective
Spironolactone	Starting dose: 50-100 mg po daily Usual maintenance dose: 100-200 mg po daily
Oestrogen options	
Oestradiol valerate (Progynova®)	Starting dose: 1 mg po daily* Usual maintenance dose: 2-4 mg, maximum 6 mg po daily
Oestradiol patch (Estradot®)	Starting dose: 25 mcg patch twice weekly Usual maintenance dose: 100-200 mcg patch twice weekly

\* Note Induction of Puberty Protocol to be used for younger adolescent if aiming to ensure maximal height (Hembree)



**Table 5. Effects of feminising hormones** (Adapted from The Endocrine Society Guidelines 2017<sup>8</sup> and The Royal Children's Hospital Standards of Care<sup>5</sup>)

Effect of oestrogen	Expected onset	Expected maximum effect	Reversibility
Redistribution of body fat	3-6 months	2-3 years	Likely
Decrease in muscle mass and strength	3-6 months	1-2 years	Likely
Softening of skin/decreased oiliness	3-6 months	unknown	Likely
Decreased sexual desire	1-3 months	3-6 months	Likely
Decreased spontaneous erections	1-3 months	3-6 months	Likely
Breast growth	3-6 months	2-3 years	Not possible
Decreased testicular volume	3-6 months	2-3 years	Unknown
Decreased sperm production	unknown	> 3 years	Unknown
Thinning and slowed growth of body and facial hair	6-12 months	> 3 years <sup>a</sup>	Possible
Male pattern baldness	Variable	<sup>b</sup>	
Voice changes	None	<sup>c</sup>	

<sup>a</sup>Complete removal of hair requires laser treatment

<sup>b</sup>Familial scalp hair loss may occur if estrogens are stopped.

<sup>c</sup>Treatment by speech-language therapists for voice training is most effective

**Table 6. Ongoing investigations for maintenance feminising therapy**

Annual blood tests	Electrolytes – monitor more frequently if on spironolactone LFT HbA1c – if risk factors suggest indicated Lipids – if risk factors suggest indicated Oestradiol - avoid supraphysiological levels (target < 500 pmol/L) Testosterone (aim for level < 2 nmol/L)
Every two years	Prolactin
If major risk factors for osteoporotic #	Consider bone density scan (DEXA)



## Potential complications for feminising therapy:

- Venous thromboembolism:
  - particularly if aged > 40 years
  - most common in first 2 years of treatment
  - reduced risk on transdermal oestrogen
  - if aged > 40 years or other DVT risks, consider switching to transdermal oestrogen
- Cardiovascular disease – adverse lipid profile, hypertension
- Insulin resistance
- Liver dysfunction
- Gallstones
- Alterations in mood and libido
- Small risk of osteoporosis, breast cancer, and (rarely) hyperprolactinaemia.

## Masculinising hormonal therapy

Testosterone can be added to a GnRH agonist or started on its own. It is contraindicated in pregnancy; always discuss whether there is a need for contraception. For those trans men, transmasculine, and/or non-binary people who have started on a GnRH agonist, periods will usually cease within the first 3-6 months of treatment. Start a low dose of testosterone and increase gradually. Following initiation of testosterone it is advisable to continue the GnRH agonist until the person is on the full dose of testosterone and well virilised to avoid any undesired bleeding. For those who have not started on a GnRH agonist and are not yet ready to start testosterone other interventions to achieve bleeding cessation may be beneficial including:

- Primolut® (norethisterone) po 5mg bd to 10 mg tds. Norethisterone is partially metabolised to ethinylestradiol in the body, which at these high doses is equivalent to levels in the combined oral contraceptive.<sup>15\*</sup>
- Provera® (medroxyprogesterone) po 10 mg tds or 20 mg nocte\*
- Combined Oral Contraception – continuous active pill taking to avoid menstruation (note: some people may not be comfortable with being prescribed oestrogens)
- Depo-provera® (medroxyprogesterone acetate) 150 mg IM every 12 weeks
- Mirena® (levonorgestrel) – intra-uterine device

*\*Note: not considered effective contraception.*

The additional consideration of need for adequate contraception may affect the choice made.





**Table 7. Recommended medical examination and investigations prior to starting masculinising hormones**

Physical Examination	Investigations
Blood pressure	FBC
Height	LFT
Weight	HbA1c – if risk factors suggest indicated
BMI	Lipids
Tanner stage (in adolescents)	LH
	Oestradiol
	Testosterone
	Urine/serum HCG if appropriate*

\* Testosterone is contraindicated in pregnancy.

**Table 8. Masculinising hormones. See [Appendix C](#) for example consent form.**

Testosterone	Dose (Adults and older adolescents)
Androderm® patches	7.5 mg daily (local irritation common)
Sustanon® (testosterone esters)	250 mg/ml IM every 3 weeks*
Depo T (testosterone cypionate)	100 – 200 mg IM every two weeks or, 100 mg SC weekly - 200 mg SC every 2 weeks
Reandron® (testosterone undecylate)	1000 mg IM every 10 - 12 weeks (second dose at six weeks to achieve steady state)

\*Sustanon contains arachis oil and should be potentially avoided in those with peanut allergies.

**Table 9. Effects of masculinising hormones** (Adapted from The Endocrine Society Guidelines 2017<sup>8</sup> and The Royal Children's Hospital Standards of Care<sup>5</sup>)

Effect of testosterone	Expected onset	Expected maximum effect	Reversibility
Skin oiliness/acne	1-6 months	1-2 years	Likely
Facial body/hair growth	6-12 months	4-5 years	Unlikely
Scalp hair loss	6-12 months <sup>a</sup>	variable	Unlikely
Increased muscle mass/strength	6-12 months	2-5 years	Likely
Redistribution of body fat	1-6 months	2-5 years	Likely
Cessation of periods	1-6 months		Likely
Clitoral enlargement	1-6 months	1-2 years	Unlikely
Vaginal atrophy	1-6 months	1-2 years	Unlikely
Deepening of voice	6-12 months	1-2 years	Not possible
Increased sexual desire	variable	variable	Likely

<sup>a</sup>Highly dependent on age and inheritance; may be minimal.



**Table 10. Ongoing investigations for maintenance masculinising therapy**

Blood tests	<p>FBC – every 3 months in first year, then 1-2 times yearly*</p> <p>LFT</p> <p>HbA1c – if risk factors suggest indicated</p> <p>Lipids</p> <p>Testosterone (aim for normal male range)**</p>
If major risk factors for osteoporotic #	Consider bone density scan (DEXA)

\* Polycythemia risk, consider testosterone dose reduction if Hct > 0.54

\*\* Testosterone should be measured midway between injections for Depo-testosterone or Sustanon, and immediately prior to an injection for Reandron.

**Potential complications for masculinising therapy:**

- Polycythemia – If severe, risk of thrombotic event
- Adverse lipid profile
- Mood and libido changes
- Obstructive sleep apnoea

Small risk of liver dysfunction, insulin resistance, cardiovascular disease, endometrial hyperplasia, and osteoporosis.



## Gender affirming surgical treatment

While some transgender people are comfortable with the expression of their gender identity without some form of surgery, for others surgery is essential to alleviate their body dysphoria and/or live fully and authentically in their gender.

Availability and funding are significant issues within New Zealand. DHBs do have expertise around provision of; chest surgery (chest reconstruction to masculinise/breast augmentation to feminise where there has been no response to oestrogen), hysterectomy, oophorectomy and orchidectomy. Some DHBs have expertise in plastic surgical techniques such as laryngeal shaves and facial feminisation while other interventions such as laser hair removal are not provided at all. Currently access to funded genital reconstruction surgery (metoidioplasty or phalloplasty (masculinising) and vaginoplasty (feminising)) is via the Ministry of Health (MOH) high cost treatment pool. The MOH require a referral from a DHB specialist in order to access funding through the high cost treatment pool.

WPATH SOC v7 guidelines provide internationally recognised standards and criteria for accessing individual surgeries.<sup>14</sup> These are currently being revised and SOC v8 will inform practice internationally, including in Aotearoa, New Zealand.

WPATH SOC v7 criteria for access to chest reconstruction surgery:<sup>14</sup>

- Persistent, well-documented gender dysphoria.
- Capacity to make a fully informed decision and to consent for treatment.
- Age of majority.
- If significant medical or mental health concerns are present, they must be reasonably well controlled.

Note that hormone therapy is not a pre-requisite for masculinising chest surgery but is recommended for a minimum of 12 months prior to consideration of feminising chest surgery.

WPATH SOC v7 criteria for access to hysterectomy, salpingo-oophorectomy and orchidectomy:

- Persistent, well documented gender dysphoria.
- Capacity to make a fully informed decision and to consent for treatment;
- Age of majority.
- If significant medical or mental health concerns are present, they must be well controlled.
- 12 continuous months of hormone therapy as appropriate to the patient's transition goals (unless the patient has a medical contraindication or is otherwise unable or unwilling to take hormones).

The aim of hormone therapy prior to gonadectomy is primarily to introduce a period of reversible estrogen or testosterone suppression, before the patient undergoes irreversible surgical intervention.

WPATH SOC v 7 criteria for access to metoidioplasty or phalloplasty (masculinising) and for vaginoplasty (feminising):



- Persistent, well documented gender dysphoria.
- Capacity to make a fully informed decision and to consent for treatment.
- Age of majority.
- If significant medical or mental health concerns are present, they must be well controlled.
- 12 continuous months of hormone therapy as appropriate to the patient's gender goals (unless the patient has a medical contraindication or is otherwise unable or unwilling to take hormones).
- 12 continuous months of living in a gender role that is congruent with their gender identity (note that this can include gender identities other than male and female)

In New Zealand, current practice is that the person must be 18 years or older to access publicly funded surgeries as above and in addition to the referral letter from the prescribing clinician, a letter of support from a mental health professional should be provided. The role of the mental health professional is to ensure that the person is psychologically prepared for the surgery (for example, has made a fully informed decision with clear and realistic expectations and is practically prepared for the event).<sup>14</sup> While WPATH SOC v7 advises that both letters should be provided by mental health professionals, in New Zealand it is usually the prescribing clinician who has the best knowledge of the client and is therefore seen to be the most appropriate person to make the referral

## Laser hair removal

Laser hair removal is not publicly funded in New Zealand. However, this can form an important part of gender affirming treatment for some transgender people, particularly as anti-androgens and oestrogen therapies will not completely halt facial hair growth that is already established.

Be aware of local providers of laser hair removal, and work with trans and gender diverse people to find ways they may be able to afford to access this treatment.

## Voice and communication training

Speech and communication are fundamental to the way in which we express our gender. The goal of speech-language therapists is to help transgender and gender diverse people develop voice and communication that reflect their unique sense of gender.

When outer expression is congruent with an inner sense of self, transgender people may find increased comfort, confidence, and improved function in everyday life.<sup>16</sup>



## References

1. Hira Huata (personal email 30<sup>th</sup> August 2017).
2. Te Taura Whiri i te Reo Māori. Lee Smith (personal email 28<sup>th</sup> August 2017) “Te Taura Whiri i te Reo Māori support the development of new vocabulary when recommended by users of that word.”
3. Dame Naida Glavish (personal email 13<sup>th</sup> May 2018)
4. Williams 1871. The traditional word ‘takatāpui’, reclaimed from the manuscripts of Wīremu Maihi Te Rangikāheke (c1840s) by Professor Ngahuia Te Awekotuku and Lee Smith, is defined as meaning ‘intimate companion of the same sex’. (Williams 1871:147).
5. Telfer M, Tollit M, Pace C, Pang K. Australian Standards of Care and Treatment Guidelines for Trans and Gender Diverse Children and Adolescents. Melbourne: The Royal Children’s Hospital; 2017.
6. Coleman E, Bockting W, Botzer M, Cohen-Kettenis P, DeCuypere G, Feldman J et al. Standards of care for the health of transsexual, transgender, and gender-nonconforming people, version 7. *Int J Transgend*. 2012;13(4):165-232.
7. Delahunt J, Denison HJ, Sim DA, Bullock JJ, Krebs JD. Increasing rates of people identifying as transgender presenting to endocrine services in the Wellington region. *NZMJ*. 2018 Jan131(1468):33-42.
8. Hembree WC, Cohen-Kettenis PT, Gooren L, Hannema SE, Meyer WJ, Hassan Murad M, et al. Endocrine Treatment of Gender-Dysphoric/ Gender-Incongruent Persons: An Endocrine Society Clinical Practice Guideline. *J Clin Endocrinol Metab*. 2017 Nov 102(11):3869–3903.
9. Obedin-Maliver J, Makadon HJ, Transgender men and pregnancy. *Obstet Med*. 2016;9(1):4-8.
10. Hines M (2006) Prenatal testosterone and gender-related behaviour. *Eur J Endocrinol*. (2006) 155 S115–S121.
11. de Vries AL, McGuire JK, Steensma TD, Wagenaar EC, Doreleijers TA, Cohen-Kettenis PT. Young adult psychological outcome after puberty suppression and gender reassignment. *Pediatrics*. 2014;134:696-704.
12. Pharmac. Pharmaceutical Management Agency Update, New Zealand Pharmaceutical Schedule. Effective 1 March 2017.
13. Cornelisse V, Jones R, Fairley C, Grover S. The medical care of the neovagina of transgender women: a review. *Sex Health* 2017;14:442-450.
14. Coleman E, Bockting W, Botzer M, Cohen-Kettenis P, DeCuypere G, Feldman J et al. Standards of care for the health of transsexual, transgender, and gender-nonconforming people, version 7. *Int J Transgend*. 2012;13(4):165-232.
15. Mansour D. Safer prescribing of therapeutic norethisterone for women at risk of venous thromboembolism. *J Fam Plann Reprod Health Care*. 2012;38(3):148-9.
16. Shelagh Davies, Viktória G. Papp & Christella Antoni (2015) Voice and Communication Change for Gender Nonconforming Individuals: Giving Voice to the Person Inside. *Int J Transgend*. 2015;16(3):117-159.



## Appendix A - Tanner stages

Tanner Stages of Breast Development and Male External Genitalia.

For breast development:

1. Prepubertal
2. Breast and papilla elevated as small mound, areolar diameter increased
3. Breast and areola enlarged, no contour separation
4. Areola and papilla form secondary mound
5. Mature; nipple projects, areola part of general breast contour

For penis and testes:

1. Prepubertal; testicular volume, < 4 mL
2. Slight enlargement of penis; enlarged scrotum, pink, texture altered, testes 4–6 mL
3. Penis longer, testes larger (8–12 mL)
4. Penis and glans larger, including increase in breadth; testes larger (12–15 mL), scrotum dark
5. Penis adult size; testicular volume, 15 mL



## Appendix B - Fertility preservation information for those starting oestrogen

*Information for young people using oestrogen.*

This information is for young people who are about to have puberty blockers and/or oestrogen which may affect their fertility. It aims to help you make decisions now which may preserve your chance of having children in the future. We hope that it answers all your questions, if not, please speak to your doctor/nurse.

### What are the effects of my treatment?

Puberty blockers and/or oestrogen can affect your ability to have children. Although puberty blockers do not affect sperm production in the long term, use of oestrogen has been known to permanently stop sperm production which will cause infertility.

### What are my options?

Before you start puberty blockers and/or oestrogen, some of your semen, containing sperm, can be frozen and stored at Fertility Plus, Greenlane Clinical Centre, until you wish to start a family. The storing of semen is fully funded to patients of Hauora Tāhine able to produce a semen sample themselves. You will need to produce your semen sample at the clinic where you will be storing your sperm.

### Here are some tips for producing a semen sample:

- Tucking (pushing your testicles inside the body) may affect sperm production. New sperm produced take approximately 12 weeks to mature.
- Obtain self-collected sample of semen.
- Do Not use a condom or any form of lubricant – this can damage the sperm.
- Make sure you collect all of the semen – the first portion often contains most of the sperm.

At Fertility Plus you will be asked to bring your photo ID and to sign a consent form to allow the clinic to store your sperm. The clinic will thaw and check a small sample of your frozen sperm and they may ask you to repeat your sample if more sperm is needed. In New Zealand the law (the Human Assisted Reproductive Technology [HART] Act) allows for a ten year storage limit, although extended storage is possible.

It is very important to notify Fertility Plus with any change in address or phone number so that they will be able to contact you in the future to discuss your stored sperm. If Fertility Plus is unable to contact you then after ten years the law requires them to discard your sperm.

### Does freezing damage the sperm?

The sperm are prepared for freezing by mixing them with a protective solution, putting them into tiny straws and then reducing the temperature gradually. They are stored in liquid nitrogen at -196° C. Some of the sperm are killed in the process of freezing, the results vary but usually 25% to 50% will survive. The use of sperm that has been frozen and thawed is not associated with any increased health risks to your child.

### What happens when I want to start a family?

Different fertility methods are used depending on the quality of the semen after storage. You may qualify for funded treatment.

- **Intrauterine insemination (IUI)** – your semen is thawed and the sperm is placed into a person's uterus. This method can be used if there is plenty of semen containing large numbers of motile (moving) sperm but you may need to have stored multiple samples of sperm before this is possible (usually three or more).



- **In-vitrofertilisation (IVF)** – eggs are collected from ovaries and fertilised with your sperm in the laboratory, the embryo(s) are then placed in a person's uterus. Usually one sample of sperm will be enough for one IVF cycle but this will depend on your sperm concentration. The staff at Fertility Plus will discuss this with you and advise accordingly.
- **Intracytoplasmic sperm injection (ICSI)** – this is done as part of IVF and is used when there are only small numbers of sperm available. In this method a single sperm is injected into each egg in the laboratory. Usually one sample of sperm will be enough for several ICSI cycles.

### **What is a testicular biopsy?**

Some young people may be unable to collect semen or there may be no sperm in the semen because of pubertal stage or other reasons. In this situation it may be possible to collect sperm from your testicles using a needle or a scrotal incision via a small procedure called testicular biopsy. Sperm collected from the testicle may be frozen and used later by intracytoplasmic sperm injection (ICSI).

This procedure is not offered routinely and is not funded.

### **What are my chances of having a child?**

There is no guarantee of success. The chance of assisted reproduction being successful is dependent on many factors, including the person's age.

### **I've already started gender transition using medication, can anything be done?**

If you have started puberty blockers or oestrogen and you do not have sperm stored, there are some options to improve your chances of having children in the future. If it is acceptable to you to stop the blockers you will start to produce sperm after a number of months. This sperm could be collected and stored before restarting the puberty blockers. It is not known how the use of oestrogen will impact on testicular tissue in the longer term.

### **Talking it over**

You might not want to have children now but it is difficult for anyone to know how they will feel years ahead in the future. Take time to talk to your family and other support people about these options. Whether or not to freeze sperm is an important decision that you need to consider carefully.

## **Appendix C – Consent forms**

- Consent form for blocking female hormones
- Consent form for blocking male hormones
- Consent form for starting feminising hormones
- Consent form for starting masculinising hormones





## Consent form for blocking female hormones

*This consent form outlines important information you might want to talk to your health team about before starting blockers to block female hormones.*

**Lucrin** (Leuporelin acetate) injections or **Zoladex** (Goserelin acetate) implants work by blocking the production of female hormones in the ovaries.

The blockers are given every 10 – 12 weeks and will reduce the level of the female hormone oestrogen in the body. It will not make the body more masculine.

Blockers are a reversible medication used to stop the physical changes of puberty. It can be started in early puberty (Tanner stage 2-3). If started then blockers will usually stop significant breast development and further pubertal changes such as starting periods and widening of the hips. Blockers can also be started later in puberty where it may cause breast tissue to soften but not usually to reduce significantly in size. Blockers will stop periods but may take up to 3 – 6 months to do so.

Starting a blocker often improves psychological distress associated with having the unwanted female hormone and allows time to think about whether starting testosterone is right for you.

### Common side effects

- Hot flushes
- Mood swings – mostly in the first few weeks of starting
- Possible fatigue

Most side effects should settle within a few days to weeks of starting the medications. Allergic reactions can happen but are rare. Please tell your health team if you have any problems.

### Potential risks of blockers

- Increased height (unlikely if already through puberty)
- Decrease future bone density

### Bones

Puberty is a time of increased calcium absorption and growth of bones. Blockers may interfere with this. For this reason it is important to look after your bones while on the blockers by keeping active and having enough calcium and vitamin D. It is not known if being on blockers increases the risk for osteoporosis (thinning of bones) in older age.

### Fertility

Your fertility (ability to get pregnant) is likely to be affected after starting on a blocker, but this is not guaranteed. Contraception will be needed if there is any sexual contact that would put you at risk of getting pregnant. It is important not to get pregnant while on blockers as it may be harmful to the pregnancy.

If you decide to stop the blockers it is not expected that there will be any long term impact on fertility but periods may take a little time to return to normal.

### Sex

Being on blockers may lower your desire to have sex. It may cause your vagina to become drier. This increases the risk of sexually transmitted infections (STIs), including HIV if you are having any sexual contact with this part of the body. Condoms provide good protection against STIs and lubricant helps to prevent any discomfort.

### Risks of withholding blockers

Withholding the use of blockers may cause additional distress leading to anxiety and depression. Not using blockers can also lead to irreversible unwanted physical changes.

### The Health Team

Keeping in touch with your health team for regular checkups and blood tests is an important part of your care and will reduce the risks of being on blockers. It is your health team's responsibility to best support you to make the decisions that are right for you and to keep ourselves up to date so that we can best inform you.

For many different reasons people question whether or not they want to continue to be on blockers. This can be a normal part of your journey. Please feel free to discuss this with your prescriber before you stop your medication. Come and talk – your health team is always ready to listen.

Are there any other questions you want to ask?

#### I wish to start hormone blockers:

Name

Date

#### Prescribed by:

Name

Date

## Consent form for blocking male hormones

*This consent form outlines important information you might want to talk to your health team about before starting blockers to block male hormones.*

**Lucrin** (Leuporelin acetate) injections or **Zoladex** (Goserelin acetate) implants work by blocking the production of male hormones in the testes.

The blockers are given every 10 – 12 weeks and will reduce the level of the male hormone testosterone in the body.

Blockers are a reversible medication used to stop the physical changes of puberty. It can be started in early puberty (Tanner stage 2-3). If started then blockers will halt the male changes of puberty such as voice changes, facial hair growth, enlargement of penis and testicles.

Blockers can also be started later in puberty to prevent further masculinisation of the body including facial changes and broadening of the shoulders. It will slow down facial and body hair growth and decrease muscle development but will not reverse other changes that have already happened.

Starting blockers often improves psychological distress associated with having the unwanted male hormone and allows time to think about whether starting oestrogen is right for you.

### Common side effects

- Hot flushes
- Mood swings – mostly in the first few weeks of starting
- Possible fatigue

Most side effects should settle within a few days to weeks of starting the medications. Allergic reactions can happen but are rare. Please tell your health team if you have any problems.

### Potential risks of blockers

- Increased height (unlikely if already through puberty)
- Decrease future bone density

### Bones

Puberty is a time of increased calcium uptake and growth of bones. Blockers may interfere with this. For this reason it is important to look after your bones while on the blockers by keeping active and having enough calcium and vitamin D. It is not known if being on blockers increases the risk for osteoporosis (thinning of bones) in older age.

### Fertility

Your fertility (ability to get someone pregnant) is likely to be affected by the blockers, but this is not guaranteed. Contraception will be needed if there is any sexual contact that would put you at risk of getting someone pregnant.

For those starting on a blocker in late puberty storing sperm is an option to preserve fertility before starting the blocker.

For those starting on a blocker in early puberty sperm storage may not be possible. Fertility information will be discussed and decisions around this can be revisited again at any point before starting on hormone therapy. If you decide to stop the blockers it is not expected that there will be any long term impact on fertility.

### Sex

Being on blockers may lower your desire to have sex. It may stop your erections or make them less hard. It will decrease the size of your testicles over time. If blockers are stopped then puberty changes should resume but may take a little time to do so.

## Risks of withholding blockers

Withholding the use of blockers may cause additional distress leading to anxiety and depression. Not using blockers can also lead to irreversible unwanted physical changes.

## The Health Team

Keeping in touch with your health team for regular checkups and blood tests is an important part of your care and will reduce the risks of being on blockers.

It is your health team's responsibility to best support you to make the decisions that are right for you and to keep ourselves up to date so that we can best inform you.

For many different reasons people question whether or not they want to continue to be on blockers. This can be a normal part of your journey. Please feel free to discuss this with your prescriber before you stop your medication. Come and talk – your health team is always ready to listen.

Are there any other questions you want to ask?

### I wish to start hormone blockers:

Name

Date

### Prescribed by:

Name

Date

## Consent form for feminising hormone therapy

*This consent form outlines important information you might want to talk to your health team about before starting hormones to feminise the body.*

**Progynova** (oestradiol valerate) tablets or **Estradot** (oestradiol hemihydrate) patches provide the feminising hormone oestrogen. Testosterone blockers are needed as well unless gender reassignment surgery has occurred.

Oestrogen tablets/patches will gradually feminise the body.

Permanent body changes (even if you stop taking the tablets):

- Gradual increase in breast size over 2-3 years
- Your oestrogen dose is increased slowly for best breast development
- It is not known if taking oestrogen increases the risk of breast cancer. Take care of your breasts - it is recommended to follow the normal breast screening guidelines for women

Non-permanent body changes (that may reverse if you stop the oestrogen):

- Softer skin
- Decreased muscle mass
- Less body hair
- More fat on buttocks, hips and thighs

Things that don't change much:

- Facial hair slows down but doesn't stop completely
- Voice stays the same
- Bone structure of your face and Adam's apple doesn't change

If you stop taking your hormones some body changes stay but you may find that your body will slowly masculinise.

### Fertility

Taking the hormones stops your testicles producing testosterone. Your testicles may shrink by up to 50% and may eventually stop sperm production. If it is important for you to preserve your fertility you might want to freeze your sperm before you start treatment. Your health team will talk to you about this.

### Sex

Taking the tablets may lower your sex drive so that you are not as interested in having sex anymore. You may find that you get erections less often and that your penis doesn't get as hard anymore. If you want to be able to use your penis for sexual pleasure talk to your health team and they will review your medications.

### Mental health

Some people may feel more emotional taking oestrogen. Some people find their mental health improves – the effects of hormones on the brain are not fully understood. Transitioning can be a stressful time and many people need some help adjusting to the physical and emotional changes. It is really important that you let your health team know if you are having problems so that they can help you access the support you need.

### Common side effects

- Nausea
- Headaches
- Tender breasts
- Weight gain

Most side effects should settle within a few days to weeks of starting the medications. Please tell your health team if you have any side effects, especially headaches or migraines.



## Potential risks of oestrogen

The full medical effects and safety of taking hormones are not fully known. The potential risks of taking oestrogen must be weighed against the benefits that hormones can have on your health and quality of life.

### Likely increased risk

- Blood clots - deep vein thrombosis (DVT), pulmonary embolism (blood clot in the lung), stroke, heart attack
- Changes to cholesterol (may increase risk of pancreatitis and heart disease)
- Gallstones

### Possible increased risk

- Increased blood pressure
- Liver problems
- Increased prolactin and possibility of benign pituitary tumours

### Possible increased risk if you have extra risk factors

- Heart disease
- Diabetes

### No increased risk/unknown risk

- Breast cancer

Some of these risks are reduced by using oestrogen patches instead of tablets.

Go to the emergency department or seek medical help urgently if:

- You have a swollen painful leg
- Chest pain or difficulty breathing
- Vision or speech problems

These symptoms might mean you have a serious problem like a blood clot.

The risk of having a blood clot is much higher if you smoke or are overweight.

Blood clots are more common as you get older. Stopping oestrogen before and after surgery can help reduce the risks of blood clots around this time.

Keeping in touch with your health team for regular checkups and blood tests is an important part of your care and will reduce the risks of taking hormonal therapy.

Are there any other questions you want to ask?

It is your health team's responsibility to best support you to make the decisions that are right for you and to keep ourselves up to date so that we can best inform you.

For many different reasons people question whether or not they want to continue to take hormones. This can be a normal part of your journey. Please feel free to discuss this with your prescriber before you stop your medication. Come and talk – your health team is always ready to listen.

### I wish to start feminising hormone therapy:

Name

Date

### Prescribed by:

Name

Date

## Consent form for starting masculinising hormone therapy

*This consent form outlines important information you might want to talk to your health team about before starting hormones to masculinise the body.*

There are different types of testosterone that are taken to masculinise the body. Everyone is different in how quickly they respond to testosterone but you will start to notice changes in your body gradually over the first few months. It may take several years before the full effect is felt. While there are different ways of getting testosterone into the body most people are on injections.

Permanent body changes (*even if you stop taking testosterone*):

- Deeper voice
- Increased growth of hair – with thicker hairs on arms, legs, chest, back and abdomen
- Gradual growth of moustache/beard hair
- Hair loss at the temples – possibly becoming bald with time
- Genital changes – clitoral growth (typically 1-3 cm) and vaginal dryness

Non-permanent body changes (*that may reverse if you stop the testosterone*):

- Skin changes – increased oil and acne
- Change in body shape – less fat on buttocks, hips and thighs
- Increased muscle mass and upper body strength
- Increased sex drive
- Periods usually stop after 1-6 months

Things that don't change much:

- Breast tissue looks a bit smaller due to fat loss
- Possible weight gain or loss

### Fertility

While it is not known what the long term effects are of taking testosterone some transmen find that if they stop their testosterone they will become fertile again and can get pregnant. There are no guarantees for anyone and it is probably harder to get pregnant the older you are and the longer you have been on testosterone.

Testosterone is dangerous for the developing fetus – **you must not get pregnant while you are on testosterone.** Even after your periods stop you might still be at risk of getting pregnant. If you are having any sexual contact that puts you at risk of pregnancy you must talk to your health team about contraception options.

### Sex

Taking testosterone causes your vagina to become dryer and more fragile. This increases the risk of sexually transmitted infections (STIs), including HIV if you are having any sexual contact with this part of the body. Condoms provide good protection against STIs and lubricant helps to prevent any discomfort.

### Mental health

Some people find that testosterone can cause emotional changes such as increased irritation, frustration and anger. Some people find their mental health improves – the effects of hormones on the brain are not fully understood. Transitioning can be a stressful time and many people need some help adjusting to the physical and emotional changes. It is really important that you let your health team know if you are having problems so that they can help you access the support you need.

## Potential risks of testosterone

The full medical effects and safety of taking hormones are not fully known. The potential risks of taking testosterone must be weighed against the benefits that hormones can have on your health and quality of life.

Likely increased risk

- Increased red blood cells (polycythemia) - might thicken the blood and increase the risk of a stroke or heart attack
- Sleep apnoea (sleep disorder)

Possible increased risk

- Changes to cholesterol (may increase risk for heart disease)
- Liver problems

Possible increased risk if you have additional risk factors

- Diabetes
- Increased blood pressure

No increased risk or unknown

- Breast cancer
- Cervical, ovarian, uterine cancer
- Blood clots – deep vein thrombosis (DVT)

The risk of health problems is higher if you are a smoker or overweight.

Keeping in touch with your health team for regular checkups and blood tests is an important part of your care and will reduce the risks of taking hormonal therapy.

Are there any other questions you want to ask?

It is your health team's responsibility to best support you to make the decisions that are right for you and to keep ourselves up to date so that we can best inform you.

For many different reasons people question whether or not they want to continue to take hormones. This can be a normal part of your journey. Please feel free to discuss this with your prescriber before you stop your medication. Come and talk – your health team is always ready to listen.

### I wish to start masculinising hormone therapy:

Name

Date

### Prescribed by:

Name

Date