

### Search Strategies

#### Questions Covered:

PICO questions:

1. For children, adolescents, and young adults (<21) with gender dysphoria, what are the effects of treatment with **puberty blockers (gonadotrophin releasing hormone (GnRH) analogues)** compared to no puberty blockers?
2. For children, adolescents, and young adults (<21) with gender dysphoria, what are the effects of treatment with **cross-sex hormones** compared to no cross-sex hormones?
3. For children, adolescents, and young adults (<21) with gender dysphoria, what are the effects of **gender-affirming surgeries** compared to no surgery?

#### Search Strategies:

Note: Population, puberty blocker, cross-sex hormones search blocks adapted from NICE (2020) evidence reviews. Gender-affirming search block adapted from Wernick *et al.* 2019. Systematic reviews filter adapted from McMaster University Health Information Research Unit (HIRU).

Databases: Medline, Epistemonikos  
 Grey Literature: CADTH, AHRQ, SEGM, NICE

#### Medline

OVERVIEW		
Interface:	Ovid	
Databases:	OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present	
Study Types:	Systematic Reviews	
Search Run:	April 23, 2022	
Search Strategy: search terms [number of results]		
<i>Population</i>		
1	exp "Sexual and Gender Minorities"/	12385
2	Gender Dysphoria/	774
3	Gender Identity/	20481
4	Gender Role/	197
5	"Sexual and Gender Disorders"/	81
6	Transsexualism/	4236
7	Transgender Persons/	5303
8	Health Services for Transgender Persons/	186

9 exp Sex Reassignment Procedures/ 1208  
 10 gender identity disorder.mp. 492  
 11 non-binary.mp. 566  
 12 transgender.mp. 9989  
 13 (gender\* adj3 (dysphori\* or disorder\* or distress or nonconform\* or non-conform\* or atypical or incongru\* or identi\* or disorder\* or confus\* or minorit\* or queer\* or variant or diverse or creative or explor\* or question\* or expan\* or fluid)).tw. 16428  
 14 ((sex or gender\*) adj3 (reassign\* or chang\* or transform\* or transition\* or expression\*)).tw. 13749  
 15 (transgend\* or transex\* or transsex\* or transfem\* or transwom\* or transma\* or transmen\* or transperson\* or transpeopl\*).tw. 19665  
 16 (genderfluid or genderqueer or agender).mp. 130  
 17 ((correct or chosen) adj3 name).mp. 591  
 18 (trans or crossgender\* or cross-gender\* or crossex\* or cross-sex\* or genderqueer\*).tw. 135313  
 19 ((sex or gender\*) adj3 (reassign\* or chang\* or transform\* or transition\* or expression\*)).tw. 13749  
 20 (male-to-female or m2f or female-to-male or f2m).tw. 148579  
 21 or/1-20 342948

#### *Cross-Sex Hormones*

22 Hormones/ad, tu, th 4676  
 23 exp Progesterone/ad, tu, th 11265  
 24 exp Estrogens/ad, tu, th 29635  
 25 exp Gonadal Steroid Hormones/ad, tu, th 35375  
 26 (progesteron\* or oestrogen\* or estrogen\*).tw. 223307  
 27 ((cross-sex or crossex or gender-affirm\*) and (hormon\* or steroid\* or therap\* or treatment\* or prescri\* or pharm\* or medic\* or drug\* or intervention\* or care)).tw. 1488  
 28 exp Estradiol/ad, tu, th 11197  
 29 exp Testosterone/ad, tu, th 8710  
 30 (testosteron\* or sustanon\* or tostran or testogel or testim or restandol or andriol or testocaps\* or nebido or testavan).tw. 86509  
 31 (oestrad\* or estrad\* or evorel or ethinyloestrad\* or ethinylestrad\* or elleste or progynova or zumenon or bedol or femseven or nuvelle).tw. 100252  
 32 or/22-31 345895

#### *Puberty Blockers*

33 Gonadotropin-Releasing Hormone/ 28809  
 34 (pubert\* adj3 block\*).ti,ab. 141  
 35 ((gonadotrophin or gonadotropin) and releasing).ti,ab. 20121  
 36 (GnRH adj2 analog\*).ti,ab. 2878  
 37 GnRH\*.ti,ab. 24390  
 38 "GnRH agonist".ti,ab. 4749  
 39 Triptorelin Pamoate/ 1981  
 40 triptorelin.ti,ab. 821  
 41 arvekap.ti,ab. 1

42	("AY 25650" or AY25650).ti,ab.	1	
43	("BIM 21003" or BIM21003).ti,ab.	0	
44	("BN 52014" or BN52014).ti,ab.	0	
45	("CL 118532" or CL118532).ti,ab.	0	
46	Debio.ti,ab.	119	
47	diphereline.ti,ab.	28	
48	moapar.ti,ab.	0	
49	pamorelin.ti,ab.	1	
50	trelstar.ti,ab.	3	
51	triptodur.ti,ab.	1	
52	("WY 42422" or WY42422).ti,ab.	0	
53	("WY 42462" or WY42462).ti,ab.	0	
54	gonapeptyl.ti,ab.	0	
55	decapeptyl.ti,ab.	225	
56	salvacyl.ti,ab.	0	
57	Buserelin/	2137	
58	buserelin.ti,ab.	1395	
59	onist.ti,ab.	0	
60	("hoe 766" or hoe-766 or hoe766).ti,ab.	72	
61	profact.ti,ab.	2	
62	receptal.ti,ab.	31	
63	suprecur.ti,ab.	5	
64	suprefact.ti,ab.	25	
65	tiloryth.ti,ab.	0	
66	histrelin.ti,ab.	78	
67	"LHRH-hydrogel implant".ti,ab.	1	
68	("RL 0903" or RL0903).ti,ab.	1	
69	("SPD 424" or SPD424).ti,ab.	1	
70	goserelin.ti,ab.	1016	
71	Goserelin/	1643	
72	("ici 118630" or ici118630).ti,ab.	51	
73	("ZD-9393" or ZD9393).ti,ab.	0	
74	zoladex.ti,ab.	388	
75	leuprorelin.ti,ab.	525	
76	carcinil.ti,ab.	0	
77	enanton*.ti,ab.	26	
78	ginecrin.ti,ab.	0	
79	leuplin.ti,ab.	15	
80	Leuprolide/	3018	
81	leuprolide.ti,ab.	2004	
82	lucrin.ti,ab.	16	
83	lupron.ti,ab.	183	
84	provren.ti,ab.	0	
85	procrin.ti,ab.	3	
86	("tap 144" or tap144).ti,ab.	41	
87	(a-43818 or a43818).ti,ab.	3	
88	Trenantone.ti,ab.	2	
89	staladex.ti,ab.	0	

90	prostap.ti,ab.	6	
91	Nafarelin/	327	
92	nafarelin.ti,ab.	263	
93	("76932-56-4" or "76932564").ti,ab.	0	
94	("76932-60-0" or "76932600").ti,ab.	0	
95	("86220-42-0" or "86220420").ti,ab.	0	
96	("rs 94991 298" or rs94991298).ti,ab.	0	
97	synarel.ti,ab.	13	
98	deslorelin.ti,ab.	306	
99	gonadorelin.ti,ab.	237	
100	("33515-09-2" or "33515092").ti,ab.	0	
101	("51952-41-1" or "51952411").ti,ab.	0	
102	("52699-48-6" or "52699486").ti,ab.	0	
103	cetorelix.ti,ab.	520	
104	cetrotide.ti,ab.	52	
105	("NS 75A" or NS75A).ti,ab.	0	
106	("NS 75B" or NS75B).ti,ab.	0	
107	("SB 075" or SB075).ti,ab.	1	
108	("SB 75" or SB75).ti,ab.	67	
109	gonadoliberin.ti,ab.	151	
110	kryptocur.ti,ab.	7	
111	cetorelix.ti,ab.	520	
112	cetrotide.ti,ab.	52	
113	antagon.ti,ab.	18	
114	ganirelix.ti,ab.	160	
115	("ORG 37462" or ORG37462).ti,ab.	3	
116	orgalutran.ti,ab.	26	
117	("RS 26306" or RS26306).ti,ab.	5	
118	("AY 24031" or AY24031).ti,ab.	0	
119	factrel.ti,ab.	13	
120	fertagyl.ti,ab.	12	
121	lutrelef.ti,ab.	5	
122	lutrepulse.ti,ab.	3	
123	relefact.ti,ab.	10	
124	fertiral.ti,ab.	0	
125	(hoe471 or "hoe 471").ti,ab.	6	
126	relisorm.ti,ab.	4	
127	cystorelin.ti,ab.	19	
128	dirigestran.ti,ab.	5	
129	or/33-128	47108	

*Gender-affirming Surgeries*

130	virilization/	2309	
131	(virilism or virili?ation or masculini?ation).mp.	5657	
132	feminization/	797	
133	femini?ation.mp.	3420	
134	(vaginoplasty or vaginoplasties).mp.	1022	

135 exp Vagina/ or \*Reconstructive Surgical Procedures/ 78841  
 136 (vaginoplasty or vaginoplasties).mp. 1022  
 137 (phalloplasty or phalloplasties).mp. 561  
 138 exp Penile Prosthesis/ 1636  
 139 "penile reconstruction".mp. 292  
 140 (vagina reconstruction or vaginal reconstruction).mp. 549  
 141 (genitoplasty or genitoplasties).mp. 263  
 142 transsexualism/su [Surgery] 1007  
 143 sex reassignment.mp. 1668  
 144 sex transformation.mp. 42  
 145 or/130-144 91560

*Systematic Review Filter*

147 meta-analysis/ 158633  
 148 (meta anal\* or meta-anal\* or metaanal\*).ti,ab. 231876  
 149 ((systematic or evidence) adj2 (review\* or overview\*)).ti,ab. 279806  
 150 ((pool\* or combined) adj2 (data or trials or studies or results)).ab. 65411  
 151 (search strategy or search criteria or systematic search or study selection or data extraction).ab. 70886  
 152 (search\* adj4 literature).ab. 84593  
 153 or/146-152 521554

*Combine Interventions and Population*

154 32 or 129 or 145 459771  
 155 21 and 154 17838

*Limit to Systematic Reviews in English Language*

156 153 and 155 295  
 157 limit 156 to english language 288

*Epistemonikos*

<b>OVERVIEW</b>	
Interface:	<a href="https://www.epistemonikos.org/">https://www.epistemonikos.org/</a>
Database:	Epistemonikos
Study Types:	Systematic Reviews
Search Run:	April 23, 2022
<b>Search Strategy: search terms [number of results]</b>	
<i>Population</i>	
(title:(title:(gender dysphoria) OR abstract:(gender dysphoria)) OR (title:(gender identity disorder) OR abstract:(gender identity disorder)) OR (title:(transgender) OR abstract:(transgender))) OR abstract:(title:(gender dysphoria) OR abstract:(gender dysphoria)) OR (title:(gender identity disorder) OR abstract:(gender identity disorder)) OR (title:(transgender) OR abstract:(transgender)))	
<i>Limit to Systematic Reviews</i>	
*Limited by publication type "systematic review" [425]	

Canadian Agency for Drugs and Technologies in Health (CADTH)

<b>OVERVIEW</b>	
Interface:	<a href="https://www.cadth.ca/">https://www.cadth.ca/</a>
Database:	CADTH
Study Types:	Systematic Reviews, Health Technology Reviews
Search Run:	April 27, 2022
<b>Search Strategy: search terms [number of results]</b>	
"gender dysphoria" [10] <i>Limit to Health Technology Review</i> [2]	
"transgender" [9] <i>Limit to Health Technology Review</i> [5]	
"gender identity disorder" [1]	

Agency for Healthcare Research and Quality (AHRQ)

OVERVIEW	
Interface:	<a href="https://search.ahrq.gov/">https://search.ahrq.gov/</a>
Database:	AHRQ
Study Types:	Evidence Based Practice (EPC) Centre Reports, Full Research Reports, Health Technology Assessments
Search Run:	April 29, 2022
Search Strategy: search terms [number of results]	
<i>Search titles only:</i> "gender identity disorder" "gender dysphoria" "transgender" [7]	

Society for Evidence-based Gender Medicine (SEGM)

OVERVIEW	
Interface:	<a href="https://segm.org/news">https://segm.org/news</a>
Database:	SEGM News
Study Types:	Systematic Reviews
Search Run:	April 30, 2022
Search Strategy: search terms [number of results]	
<i>Find in page:</i> "systematic" [5]	

National Institute for Health and Care Excellence (NICE)

OVERVIEW	
Interface:	<a href="https://www.nice.org.uk/">https://www.nice.org.uk/</a>
Database:	NICE
Study Types:	Systematic Reviews, Guidelines with Systematic Reviews
Search Run:	April 30, 2022
Search Strategy: search terms [number of results]	
gender dysphoria [1] <i>Limit to Guidance</i> [1]	
transgender [10] <i>Limit to Guidance</i> [7]	

gender identity disorder [9]  
*Limit to Guidance* [8]