Premature Ejaculation

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Today

• Ejaculation
• Definition
• Prevalence
• Aetiology
• Assessment
• Treatment
• QUIZ
Normal ejaculation

- Sexual interest/stimulation
- Penile tumescence
- High excitation/penile erection
- Penetration
- Plateau
- Post-ejaculatory detumescence
- Ejaculation with orgasm
- Resolution

Premature ejaculation

- Rapid ejaculation with orgasm
- Short plateau
- Rapid excitement


Neural control of ejaculation: key supraspinal centres

Sensory inputs from genital areas

Excitatory and inhibitory control

Cortex

Thalamus

Hypothalamus:
Paraventricular nucleus (PVN)
Medial preoptic area (MPOA)

Midbrain:
Periaqueductal grey (PAG)

Pons:
Nucleus paragigantocellularis (nPGi)

Neurotransmitters involved in ejaculation

- Serotonin, dopamine, gamma-amino butyric acid and noradrenaline are all involved in the processing of emission and ejaculation

- 5-HT (serotonin) the key neurotransmitter involved in the processing of ejaculation

It is assumed that central serotonin (5-HT) has an inhibitory role in the neural control of male sexual behavior.

Ejaculation Phases

Emission
• Central integration → neurotransmitter release → Smooth muscle contraction → Release of sperm
• Controlled by sympathetic nervous system

Expulsion
• Rhythmic contractions → expulsion
• Controlled by somatic and autonomic nervous system
How do we define PE?
Masters & Johnson

• Inability to control ejaculatory process for a sufficient length of time during intravaginal containment to satisfy his partner in at least 50 percent of their coital connections
ISSM definition of lifelong PE:

• Ejaculation which always or nearly always occurs prior to or within about one minute of vaginal penetration
  
  \[ \text{and} \]

• Inability to delay ejaculation on all or nearly all vaginal penetrations
  
  \[ \text{and} \]

• Negative personal consequences, such as distress, bother, frustration and/or the avoidance of sexual intimacy
Persistent or recurrent ejaculation with minimal sexual stimulation, before, on, or shortly after penetration and before the person wishes it (<1 minute)

The condition must also cause marked distress or interpersonal difficulty

Not due exclusively to the direct effects of a substance

> 6 months
What is the population average for time to ejaculation?

Unselected ‘normal’ population of 500 heterosexual couples
Stopwatch timing of the intravaginal ejaculatory latency time (IELT)

Median IELT of 5.4 minutes

n = 491

How common is PE?
Prevalence of PE is consistent across age groups

PEPA study: Premature Ejaculation Perceptions and Attitudes.

NHSLS 1999

National Health and Social Life Survey analysis

Prevalence (%) vs. Age group (years)

PE defined as ‘climaxing too early’;
ED defined as ‘trouble achieving or maintaining erection’.

Adapted from Laumann et al. JAMA 1999;281:537-544.
Perceptions of PE can overlap with perceptions of ‘normal’

IELTs in subjects with and without PE overlap, especially in the 1–4-minute timeframe

- Non-PE median = 8.8 (n=844)
- PE median = 2.0 (n=182)

Subjects with an average IELT values ≥20.5 minutes were combined into a single category.

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Impact of PE
Psychological effects of PE on men

- Reductions in levels of sexual functioning
- Reductions in level of satisfaction
- Reductions in overall quality of life
- Increased levels of distress
- Increased levels of interpersonal difficulty.

*Diagnosis of PE made according to DSM-IV-TR criteria + IELT ≤2 minutes. (PE n = 89)
Psychological effects of PE on Partners

Question 10. What channel 4 comedy series are these characters from?
Proportion of women reporting good or very good levels of satisfaction with sexual intercourse

PE may impact on the partner’s satisfaction

1587 men in USA

Graphically elaborated from text

Potential affect of PE

- Repeated PE $\rightarrow$ loss of self esteem, anxiety, ED and decreased libido, relationship difficulties
Types of PE

• Primary
  – Lifelong
  – Genetic predisposition

• Secondary
  – Acquired after period of normal ejaculatory function
  – May be due to relationship issues or PTSD
  – Strong anxiety/psychological component
Subtypes of PE

- Natural variable PE
- Premature-like ejaculatory dysfunction
Subtypes of PE

• Natural variable PE
• Premature-like ejaculatory dysfunction
Subtypes of PE

- Natural variable PE
- Premature-like ejaculatory dysfunction

(i) subjective perception of consistent or inconsistent rapid ejaculation during intercourse;
(ii) preoccupation with an imagined early ejaculation or lack of control of ejaculation;
(iii) actual intravaginal ejaculation latency time (IELT) in the normal range or even of longer duration (i.e., an ejaculation that occurs after 5 minutes);
(iv) ability to control ejaculation (i.e., to withhold ejaculation at the moment of imminent ejaculation) may be diminished or lacking; and
(v) The preoccupation is not better accounted for by another mental disorder
Aetiology

- Biological
- Genetic
- Psychological
Aetiology

• Biological
• Genetic
• Psychological
Biological

• Thyroid Dysfunction
  • Carani et al reported that 50% of hyperthyroid men had PE; when hyperthyroidism treated the prevalence of PE fell to 15%

• Prostatitis
  • 26 - 77% of men with chronic prostatitis or chronic pelvic pain syndrome report experiencing PE [Gonen et al, Liang et al, Trinchieri et al ]

• Pelvic injury/neurological disease/vascular disease/varicocele

• Prescribed or recreational drugs
  • amphetamine, cocaine and dopaminergic drugs, Alcohol and opiate withdrawal
Aetiology

• Biological
• Genetic
• Psychological
Genetic

• Genetic polymorphisms may create a predisposition in some men to ejaculate prematurely
  • Serotonin receptors
  • Dopamine receptors

• May have ejaculatory threshold genetically set at a lower point and ejaculate more quickly
Aetiology

• Biological
• Genetic
• Psychological
Psychological

- Predisposing factors
  - Attitude to sex when growing up, Sexual abuse
- Individual factors
  - Infrequent sexual activity, body image, performance anxiety
- Relationship factors
  - Situational stressors
  - Novelty of partner
Assessment
History

• Sexual history
  – IELT
  – Ejaculatory control
  – Dissatisfaction or distress.
  – Lifelong/acquired
  – ED/desire problems

• Causal/maintaining factors
  – Medical and psychiatric history
  – Urinary and prostatitis symptoms
  – Drug History (including alcohol and rec drug use)
  – Interpersonal factors
  – Social history and cultural context
Examination

• Genital examination
• Brief general physical and mental state assessments
Treatment
Treatment

• Education
  – Sexual norms
  – Expectation management

• Behavioural

• Pharmacological
Treatment

• Education

• Behavioural
  – Stop Start technique
  – (Squeeze technique)

• Pharmacological
Stop-start technique:

• Cease penile stimulation at the pre-inevitable point
• Restart penile simulation when arousal and erection have subsided
Squeeze technique

- Glans is firmly squeezed between the thumb and the forefingers, at the frenula level until detumescence occurs
- Accomplished by the diminution of sexual arousal
- Before its inevitable that he is going to ejaculate
Behavioural Therapies

– Stop/start
– Squeeze
– Sensate focus
– Mindfulness
– Relationship counselling
– Yoga
Treatment

• Education

• Behavioural

• Pharmacological
  – Topical anaesthetics
  – Oral – SSRIs (TCA, Tramadol, PDE-5 inhibitors)
Topical anaesthetics

- Diminish sensitivity of glans penis
- Emla (prilcaine–lidocaine), lignocaine cream, Sprays (tempe), Performa/delay condoms (benzocaine)
- Apply before Sex
- Moderately effective
- Risk of loss of erection/pleasurable sensation
- Transvaginal absorption, vaginal numbness and anorgasmia
Oral Therapy

• **SSRIs**
  – Paroxetine
  – Dapoxetine
  – Fluoxetine
  – Citalporam
  – Sertraline

• **Other**
  – TCA (clomipramine)
  – Tramadol – inhibits NA and 5HT reuptake.
  – PDE-5 inhibitors
SSRIs

- Produce increase in IELT
- SSRIs increase serotonin levels resulting in delayed ejaculation
- Unlicensed for use in PE, except dapoxetine
- OD or on demand
- SE- dry mouth, headaches, dizziness, GI upset, ED, reduced libido
- Non sustained effect on stopping medication
Dapoxetine

• Licenced for on demand treatment of PE
• It is a rapid acting, short half-life SSRI
• 30 mg or 60 mg taken 1–2 hours before intercourse
• 2.5- and 3.0-fold increases in IELT
Options for Pharmacological treatment

<table>
<thead>
<tr>
<th>Drug</th>
<th>Daily dose/as needed</th>
<th>Dose</th>
<th>IELT fold increase</th>
<th>Side effects</th>
<th>Status</th>
<th>Level of evidence</th>
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<tbody>
<tr>
<td>Oral therapies</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Dapoxetine [19,95]</td>
<td>As needed</td>
<td>30–60 mg</td>
<td>2.5–3</td>
<td>Nausea, Diarrhea, Headache, Dizziness</td>
<td>Approved in some countries</td>
<td>1a</td>
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<tr>
<td>Paroxetine [104]</td>
<td>Daily dose</td>
<td>10–40 mg</td>
<td>8</td>
<td>Fatigue, Yawning, Nausea, Diarrhea</td>
<td>Off label</td>
<td>1a</td>
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<tr>
<td>Clomipramine [99,101]</td>
<td>Daily dose</td>
<td>12.5–50 mg</td>
<td>8</td>
<td>Nausea, Diarrhea, Perspiration, Decreased sexual desire, Erectile dysfunction</td>
<td>Off label</td>
<td>1a</td>
</tr>
<tr>
<td>Sertraline [103]</td>
<td>Daily dose</td>
<td>50–200 mg</td>
<td>5</td>
<td></td>
<td>Off label</td>
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<td>Fluoxetine [102]</td>
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<td>20–40 mg</td>
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<td>Citralopam [100]</td>
<td>Daily dose</td>
<td>20–40 mg</td>
<td>2</td>
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<td>Off label</td>
<td>1a</td>
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<td>Paroxetine [112]</td>
<td>Daily dose for 30 days and then as needed</td>
<td>10–40 mg</td>
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<td>Off label</td>
<td>1a</td>
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<td>Paroxetine [114]</td>
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<td>1.4</td>
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<td>Off label</td>
<td>1a</td>
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<td>12.5–50 mg</td>
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<td>Off label</td>
<td>1a</td>
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<tr>
<td>Topical therapy</td>
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<tr>
<td>Lidocaine/prilocaine [117]</td>
<td>As needed</td>
<td>25 mg/gm lidocaine</td>
<td>4–6</td>
<td>Penile numbness, Partner genital numbness, Skin irritation, Erectile dysfunction</td>
<td>Off label</td>
<td>1b</td>
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</table>

IELT = intravaginal ejaculation latency time.

ISSM Guidelines for the Diagnosis and Treatment of Premature Ejaculation, 2010
Tramadol

• On-demand
• Centrally acting opioid analgesic
• 25mg increased IELT from 1.2 minutes at baseline to 7.4
• 50 mg IELT increased from 19 seconds to 243 seconds
• 28% of the tramadol group vs. 15% of placebo patients reported treatment related AE including nausea, vomiting and dizziness
Phosphodiesterase Type 5 Inhibitors (PDE5i)

- Sildenafil, tadalafil, and vardenafil
- Systematic review of 14 studies on the PDE5i drug treatment of PE did not provide evidence to support a role of PDE5i in the treatment of PE, except in men with PE and comorbid ED [121]
- Potential role, further evidence based research needed

McMahon et al, BJU 2006
Primary outcomes

• Auditable outcomes
  – All patients with PE must have a full history (including sexual history) and clinical examination
Flow diagram of clinical management of PE

Clinical diagnosis of premature ejaculation

Onset and duration of premature ejaculation
- Degree of distress
- Psycho-social history
- Relationship issues
- Medical history
- Physical examination

Is premature ejaculation secondary to erectile dysfunction?
- Treat erectile dysfunction

Is premature ejaculation secondary to organic problem eg prostatitis?
- Treat underlying cause

PHARMACOTHERAPY
- Topical anaesthetics (as needed)
- SSRI (Initially daily and then as needed if successful)

BEHAVIOURAL THERAPY
- Stop/start
- Squeeze
- Sensate focus

RELATIONSHIP COUNSELLING

COMBINATION THERAPY