Female chronic pelvic pain
- prevalence
- demographic characteristics
- clinical characteristics

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Definition of chronic pelvic pain [CPP]

• chronic or persistent pain for ≥ 6 months

• perceived in structures related to the anatomic pelvis

• symptoms suggested of lower urinary track, sexual, bowel, pelvic floor or gynaecological dysfunction

• associated with negative cognitive, behavioural, sexual and emotional consequences

• cyclical pain is included (dysmenorrhea) if it is persistent and associated with the above mentioned consequences

Engeler, D. et al. (2012) [EAU Guideline]; IASP [The International Association for the study of pain]
Aetiology of CPP

- Urological
- Gynaecological
- Sexual
- Musculoskeletal
- Neurological
- Interstinal
- Psycho-social
### Prevalence (estimated; heterogeneous studies)

<table>
<thead>
<tr>
<th>Author</th>
<th>Design</th>
<th>Country</th>
<th>Participants</th>
<th>Prevalence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pitts, MK 2008</td>
<td>Phone N=1983 (Health quest.)</td>
<td>Australien</td>
<td>16-49</td>
<td>21.5%</td>
</tr>
<tr>
<td>Grace, VM 2004</td>
<td>Postal N=1160 (CPP)</td>
<td>New Zealand</td>
<td>18-50</td>
<td>25.4% (3m)</td>
</tr>
<tr>
<td>Zondervan, KT 2001</td>
<td>Postal N=2304 (Health quest.)</td>
<td>UK</td>
<td>18-49</td>
<td>24% (3 m)</td>
</tr>
<tr>
<td>Zondervan, KT 1999</td>
<td>Databasestudy N=284.162 pt</td>
<td>UK</td>
<td>15-73</td>
<td>3.8% (1 y)</td>
</tr>
<tr>
<td>Mathias, SD 1996</td>
<td>Phone N=5263 (Gallup - CPP)</td>
<td>USA</td>
<td>18-50</td>
<td>14.7% (3 m)</td>
</tr>
<tr>
<td>Jamieson, D 1996</td>
<td>Primary care N=581 (pt and companion)</td>
<td>USA</td>
<td>18-45</td>
<td>39% (?)</td>
</tr>
<tr>
<td>Throngkrajal, P 1999</td>
<td>Mobile gyn. clinic (N=?)</td>
<td>Thailand</td>
<td>20-49</td>
<td>43.4% (?)</td>
</tr>
<tr>
<td>Latthe, P 2006</td>
<td>WHO (review)</td>
<td>Worldwide</td>
<td>Non-cyclic (cyclic)</td>
<td>2.1-24% (16.8-81%)</td>
</tr>
</tbody>
</table>
Female Chronic Pelvic Pain is highly prevalent in Denmark. A randomised, population-based cross-sectional study

Supervisors
Jørgen Nordling, professor, dr. med., Department of Urology
Poul Jaszczak, dr. med., Department of Gynaecology
Thordis Thomsen, RN, ph.d., Department of Anaesthesiology
Objective

1. To assess chronic pelvic pain prevalence in a randomly selected general female population group in Denmark.

2. To examine pain characteristics, risk factors and demographic- and clinical characteristics in a population sample of adult women with chronic pelvic pain living in Denmark and compare the findings with a reference group from the same background population.

3. To evaluate impact of pain on daily life in women suffering from chronic pelvic pain.
Methods

Questionnaire development and validation

- Demographic- and background variables (SIF)
- Identification of CPP (question, frequency, body-map)
- Factors related to CPP (NRS, McGill, PDQ)
- Former pelvic trauma and pelvic surgery
- Dyspareunia (painful intercourse)

2500 randomly selected females ≥ 18 years

Possible respondents were identified through the Central Office of Civil Registration

Ekholm et al. (2006); Downie et al. (1978); Melzack (1975); Freynhagen et al. (2006); Svendsen et al. (2003); Brandsborg et al. (2007)
Results: 1180 respondents (48%)

- 2500 questionnaires mailed by post
  - 52 had address unknown
  - 2 had died
- 2446 questionnaire receivers
  - 154 declined participation
- 2292 possible respondents
  - 1112 non-respondents
- 1180 respondents
  - 1 excluded due to incomplete answers

1179 (48%) respondents were included in analyses
- 837 spontaneous respondents
- 342 respondents by reminder
Conclusion

Female CPP appears highly prevalent in Denmark

Experiences of CPP were associated to

- younger age (fertile women)
- diagnosis of pelvic diseases
- previous pelvic trauma and surgery

We considered, the reported 11% CPP prevalence rate representative for the total sample and generalisable to the general female population living in Denmark, as our drop-out analyses found that respondents (48%) did not deviate from non-respondents
Standardised pelvic floor muscle examination can distinguish women with chronic pelvic pain from pain-free controls

Supervisors
Jørgen Nordling, professor, dr. med., Department of Urology
Poul Jaszczak, dr. med., Department of Gynaecology
Thordis Thomsen, RN, ph.d., Department of Anaesthesiology
Evidence suggests, that musculoskeletal factors, especially pelvic floor muscle hypertonicity contribute to CPP, both as primary pain generator and as consequence of the pain, resulting in a vicious pain circle.

Everaert et al. (2001); Hoffman (2011)
Pelvic floor muscle (PFM) dysfunction in CPP

Alternations in PFM tonus (primary outcome) are associated with decreased PFM strength and relaxation capacity, and elevated PFM pain sensitivity (secondary outcomes)

Consequently, EAU recommends (Grade A) examination of PFM function and dysfunction in patients with CPP

Butrick (2009a,b); Engeler et al. (2012)
Objective

To evaluate the applicability of a standardised* set of physiotherapeutic vaginal PFM examination manoeuvres to differentiate between women with CPP and pain-free controls

Messelink et al.(2005); Haylen et al.(2010); Slieker-ten Hove et al.(2009)
Methods: design and material

Epidemiologic combination design

• 50 consenting respondents: cross-sectional → case-control

• Blockrandomised (blocks of 10) inclusion (Jan-May 2012)

• Stratified by age 45 years

• Inclusion: women aged ≥ 18 years living in DK

• Exclusion criteria: pregnancy, known infection-, inflammation- or malignancy in the pelvic area, pelvic surgery in the preceding 6 months, obvious cognitive problems
Clinical examination (PT blinded)

Standardised set of PFM examination manoeuvres (ICS)

- Inspection
- PFM voluntary relaxation [0-2]
- PFM hypertonicity [Dietz 0-5]
- PFM strength [MOS 0-5]
- Pain during examination [PNRS 0-10]

Objectivity (suppl.)
- Mechanosensitivity (palpometer): PPDTs
- Electromyography (EMG): PFM resting tone

Slieker-ten Hove et al. (2009); Dietz & Shek (2008); Laycock (1992); Tu et al. (2008); Glazer et al. (1998)
Measurement devices

The palpometer (PPDTs)

Surface electromyography (EMG)

Tu et al. (2008); Glazer et al. (1998)
Conclusion

Empirical evidence of associated PFMD in CPP using a set of standardised and reliable intravaginal examination manoeuvres.

All intravaginal examinations differentiated between women with CPP and pain-free:
- ↑ PFM hypertonicity
- ↓ maximal strength
- ↓ postcontraction relaxation capacity
- ↑ pain sensitivity during examination

Guide clinical decision towards early specialised physiotherapy, breaking the pain circle and improving treatment outcomes.