The children in these studies were probably more unwell than most febrile children managed at home. Collating the evidence is limited by inconsistent doses and thermometry methods, and only one study measured the children's discomfort.[7] The Indian study suggests there is no advantage in using both drugs rather than one, but it may have been underpowered. The UK study helps our understanding of early treatment effects, but not those beyond one hour. The Israeli study is difficult to interpret because half the children in the monotherapy groups received both medicines in the first 24 hours and parents determined the timing of thermometry and recording of distress scores.

Evidence on safety is also limited. Renal failure is associated with the use of ibuprofen in dehydrated children,[8] and the combination of both drugs may, in theory, cause renal tubular necrosis as ibuprofen inhibits the production of renal glutathione, which detoxifies and prevents the accumulation of a nephrotoxic metabolite of paracetamol.[9] However, two studies have shown no difference in renal function comparing combined with separate use,[5 7]and the website of the Committee on Safety of Medicines has no reports of adverse events.[10]

There are other important gaps in the evidence. Most surprisingly, there is an absence of evidence of effectiveness for monotherapies compared with physical methods of reducing fever or placebo.[11] Furthermore, future research should measure the outcomes that are important to parents—namely, symptoms associated with fever.

The definition of a clinically useful difference in temperature after treatment is debatable and, given that the maximum times for antipyretic activity differ for paracetamol and ibuprofen, the timing of measuring the difference in temperature is crucial to the validity of the comparison. The best method to ensure fairness is continuous thermometry, which generates an average time spent under a fever threshold after treatment and has been used in one study to date.[12] More research using maximum therapeutic doses, continuous thermometry and measuring symptoms associated with fever is under way (www.controlled-trials.com/isrctn/trial/|/0/26362730.html), but until such evidence is available, the role of combined antipyretics is uncertain.

Given that the absence of evidence from trials is at odds with strongly held parental beliefs in many cases, and given the desire among parents and clinicians to do something when faced with febrile children, it seems churlish to conclude that combined treatment should be withheld from all children. But parents should be advised to use the minimum treatment necessary. Using two drugs always has some disadvantages: increased risks of overdosing, underdosing, and adverse effects; increased costs; greater medicalisation and—in this case—an associated risk of exacerbating fever phobia.

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Psychological interventions for treatment of adult sex offenders

Treatment can reduce reoffending rates but does not provide a cure

Sexual offending is a public health issue and a social problem. Medical practitioners might assume from the volume of work published on treatments for sex offenders that clinically effective treatments are available. Indeed, psychological treatment is often mandated in the sentencing decision for sexual offenders. Yet the effectiveness of treatments is debated, and evidence for the efficacy of sex offender treatment programmes is often too readily accepted uncritically.[1]

In conducting a Cochrane meta-analysis on the effects of such psychological interventions we found nine trials that were well conducted in terms of randomisation, blinding, loss to follow-up, and analysis.[2] These included randomised controlled trials with a total of 567 male offenders, 231 of whom were followed up for a decade.

The results indicated that studies on behavioural treatments were too small to be informative, although statistically significant improvements were recorded

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across some groups of offenders.[2] Cognitive behavioural group therapy may reduce re-offence at one year for child molesters when compared with standard care, but child molesters had poorer attitudes to treatment during cognitive behavioural therapy than during transtheoretical counselling group therapy. The largest, longest trial compared a group therapy of broadly psychodynamic type with no group therapy for 231 men guilty of paedophilia, exhibitionism, or sexual assault.[3] During the subsequent 10 years a greater proportion of those allocated to group therapy were re-arrested, but this did not reach statistical significance.

Evidence from randomised controlled trials provides only a fraction of the knowledge we need, however, particularly on recidivism. Recidivism is used here to mean a repeat sexual offence, whereas reoffending can mean any offence (either more or less serious than the index offence). Treatment failure is associated with higher rates of recidivism, and offenders who successfully complete a treatment programme reoffend less often and less seriously (that is, non-sexual reoffending) than those who do not show that they have understood and worked through the relevant psychological issues.[4] Ongoing studies suggest that various types of offenders reoffend differently—for example, paedophilic versus non-paedophilic child molesters (those with an erotic attachment to children versus those without erotic attachment but who may, for example, be aroused by violence).[5]

Randomised controlled trials are difficult to carry out in criminal justice settings, and researchers often conduct quasi-experiments instead. We assessed the quality of these and non-randomised controlled trials with matched and non-matched controls, including 21 quasi-experimental studies from the UK, USA, Canada, and Europe. Of these, seven studies showed a statistically significant treatment effect and 10 did not. In four studies the data were not clear enough to analyse.

Most participants in matched trials where a significant treatment effect was found were allocated to treatment groups according to sentencing decision and post-sentencing risk assessment. Most of these studies were matched retrospective trials carried out on offenders in the criminal justice system; matching was done retrospectively. Matching offenders with a control group is problematic and can threaten the quality of the research. The results here were equivocal: more studies found no statistically significant treatment effect than found a significant effect.

A randomised controlled trial of a complex programme will not distinguish which components are a success or failure, whereas qualitative studies can provide understanding about how treatment is received and adhered to. Little sound qualitative research on how offenders use and engage with treatment has been done. We systematically reviewed four qualitative studies that complied with the guidelines of the Cochrane critical appraisal skills programme.[2] Three were process evaluations,[6–8] and in two of these data were analysed using grounded theory[7 8]; one was an exploratory study that used thematic content analysis.[9] These studies yielded valuable findings, including crucial contextual information on factors which facilitated and impeded treatment.

Sexual offending, like many medical conditions, cannot be cured. Better understanding of the outcomes of treatments—either controlling and moderating or harming and worsening behaviour—could at least focus resources on the most beneficial and cost effective interventions.

There is enormous political and institutional pressure to prove that treatment works. Assessment of all outcomes must take the expectations of researchers into account, and also offenders' and therapists' perceptions of treatment. And, because recidivism is a proxy measure of reoffending (that is, reoffending may continue for a long period without re-conviction), more sophisticated multi-method outcome measures should be included in research designs.[10]

It should be possible to combine the strength of randomised controlled trials with the collection of good qualitative process data[11] and to ensure that psychological interventions for sex offenders are assessed using the realistic evaluation formula of: outcome = mechanism+content.[12] These concepts help the researcher to consider the dynamics of an intervention: the "context" in which it is set and the "mechanism" of the intervention, thereby ensuring that we are better able to assess what element of treatment is effective in changing the behaviour of offenders.

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