

Exposure and response prevention for Tourette syndrome, part 2 of 2

Lecturer:

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Practical information

- The slides will be available
- 50 minutes presentation
- 10 minutes for questions, please send questions in the chat

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Programme part 2

- Exposure and response prevention (ERP), part 2 of 2
- Functional analysis and interventions
- Questions

Summary ERP part 1

- Tics are common and often impairing
- Tics are usually preceded by unpleasant premonitory urges
- Psychoeducation should be provided to every patient that is diagnosed
- There are several evidence-based treatment options, such as HRT, ERP and medication
- ERP = Exposure (to the premonitory urges) + response prevention (suppressing the tics)

Programme part 2

- **Exposure and response prevention (ERP), part 2 of 2**
- Functional analysis and interventions
- Questions

ERP: Sessions in detail

- Sessions should mainly be devoted to practicing ERP (with support of the therapist)
- Suggestions for homework:
 - Exercise at home: Practice ERP in situations where premonitory urges and tics usually appear (e.g., 15-30 minutes a day).
 - Exercise in other places: Every week, choose up to a few situations where the patient can practice ERP (for example on the bus).
- The goal is to gradually expand the ERP practice to more situations so that suppressing tics becomes more automated (and part of the patient's everyday life).
- But... no one can force the patient to practice ERP. It is of course up to the patient self if s/he wants to suppress tics in a given situation.

Example: ERP session by session

- **Session 1:** Psychoeducation. Write list of current tics. ERP rationale. Begin response prevention. For children: reward chart.
 - Homework: Tics diary. Response prevention for at least 15 minutes daily.
- **Session 2:** Goal formulation (if needed). Response prevention (use a stop watch, record the times). Functional analysis and interventions.
 - Homework: Response prevention for at least 15 minutes daily.
- **Session 3:** Define and identify premonitory urges, estimate the severity of premonitory urges. Add exposure to the response prevention (focus on premonitory urges and where they are felt in the body).
 - Homework: ERP with intensity ratings of the premonitory urges, for at least 15 minutes daily.

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Example: ERP session by session

- **Session 4 and onwards:** Design an exposure hierarchy (ladder), practice ERP based on the hierarchy steps. Gradually make the practice more difficult.
 - Homework: ERP based on the exposure hierarchy for at least 15 minutes daily. Suppress tics even outside of the a priori planned situations. Generalization.
- **Last session:** Go through the tic diary. Follow up on goals. Relapse prevention plan.
- **Booster and follow-up:** Follow up the patient after the end of treatment. Add booster-sessions if needed.
 - Tics wax and wane naturally

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ERP demonstration, 1 of 2

- Film demonstrating ERP (8 min)
 - A therapist (to the right)
 - A young patient (Kim) and her mother (to the left)
- In Swedish, subtitled
- Filmed during lockdown, which explains the visors...
- <https://vimeo.com/556253202/3242879ab7>

Tips

- Try to make the practice as varied as possible! Encourage the patient to practice in a variety of situations, both at home and elsewhere.
- Just like with other exposures (e.g., anxiety), it is important to practice regularly to have an effect, the patient should preferably practice for at least 15 minutes daily.
- Eventually, the patient can be encouraged to suppress the tics in as many situations as possible during the day.
- Get the practice into everyday life, make a rule, e.g., always suppress the tics at breakfast / in the shower / on the way to work / first lesson at school.
- Make the ERP practice fun!

Tips for children

- Make ERP practice a game, a fun activity together with the family
 - “Hide and seek”, “Follow the leader”, “Musical chairs”, “Do this, do that” (with tic-like movements)
- Tic bingo / draw a note
- Tic free zones

- Schedule for practice
- Reward chart

- Avoid parents nagging about practicing, make a clear agreement on when and how parents should remind
- Ask for help from the child's teachers, coaches, grandparents etc.

ERP demonstration, 2 of 2

- Film demonstrating ERP, playing the game “Do this, Do that” (4 min)
 - One therapist (to the right)
 - A young patient (Kim) and her mother (to the left)

- <https://vimeo.com/556256253/de3010dc52>

ERP: Troubleshooting

- A tic is extra hard to suppress
 - Focus on just that tic until it can be suppressed for 5 minutes
 - If necessary, use a competing response (as in HRT)
- Small tics are hard to suppress
 - Skip suppressing smaller tics when starting the ERP practice, this can be added later. The important thing is that the patient actively practices ERP, not whether s/he suppresses all tics (s/he might not even be aware of all her/his tics).
 - If the patient does not suffer from the smaller tics, there is no need to focus on them

ERP: Troubleshooting

- The patient does not sense any premonitory urges
 - Common in younger children
 - Does not have to be a problem
 - Work with awareness training ("Capture the tic": the one who discovers the tic first gets a point / gets to take a candy from the bowl)
 - Ask how it feels in the body at the place the tic is expressed
 - Start expressing tics and stop halfway, how does it feel?
- The premonitory urges / tics do not decrease
 - Focus on suppressing tics in the situations the patient primarily prefers, e.g., school or other social situations
 - Increased control over tics
 - Connect to treatment goals

ERP: Troubleshooting

- The patient shows no tics during the sessions
 - Try to provoke tics: Let the patient purposely do tic movements, look in a mirror, imitate tics, ask about premonitory urges, ask the patient to imagine a situation where s/he has many tics, physical activity, go to a place where tics usually come
- The patient is already used to suppressing tics
 - Potentially a different outcome when the practice is more structured, and when exposure is included
 - If necessary, add competing responses (as in HRT)
- Confusion among parents regarding when tics should be noticed and not
 - General comments about tics, that the child should stop doing tics → to be avoided
 - Cheering, encouragement, reminders linked to the treatment → are okay

Reasonable expectations from ERP (and HRT)

- There is currently no treatment that can completely cure the diagnosis (ensure that the patient's tics go away completely). Inform the patient about what to reasonably expect from the treatment:
 - Increased control over the tics (the patient can more easily control in which situations s/he has tics and not)
 - Reduced tics?
 - Reduced premonitory urges?
 - Reduced tic-related impairment

Combining ERP and HRT

- Popular among therapists, especially in Europe, is to combine elements of ERP and HRT for the specific patient's individual needs
 - HRT: Using a competing response to help suppress a tic (one tic at a time)
 - HRT could e.g., be added to ERP if a patient is bothered by a large motor tic, which a competing response potentially could interrupt
- This approach has been evaluated in a pilot study in Denmark, with promising results
 - Nissen et al. (2019), Combined habit reversal training and exposure response prevention in a group setting compared to individual training: a randomized controlled clinical trial. *Eur Child Adolesc Psychiatry*. 2019 Jan;28(1):57-68.
- With increased clinical experience in the patient group, you might see benefits in combining various elements of the treatments, since they are quite similar to begin with. Be sure to know what you are doing though; it is always safer to stick to an evaluated protocol 😊

Programme part 2

- Exposure and response prevention (ERP), part 2 of 2
- **Functional analysis and interventions**
- Questions

Functional analysis

- Examine in which situations the tics occur the most
 - At what times?
 - In what places?
 - During which activities?
 - With which people?
 - When feeling which emotions?

Example: Functional analysis

<u>Time</u>	<u>Situation</u>	<u>Behavior</u>	<u>Short-term consequences</u>	<u>Long-term consequences</u>
Friday the 24th of May	At home at the dinner table, tired after a long day at school	Many motor tics such as facial grimacing, shoulder shrugging and arm movements	Parents say that the child (the patient) has to leave the table, escapes, tics decrease in the moment	Tics are at risk to increase or continue at the next family dinner, child does not eat enough, risk for more tics in the evening because of hunger and fatigue

”Basic rule”

- ”Basic rule” for family, friends, teachers etc.
 - If avoidable, do not openly pay attention to or comment on the tics. Such attention may increase the frequency/intensity of the tics. Family etc. should not comment, nag or tell the patient to stop performing the tics (if the patient could, he would of course already have stopped). If the patient himself wants to talk about the tics, then it is okay.
 - Family etc. should instead focus on reminding the patient to use strategies from the treatment (but not so frequently that it becomes annoying).

Example: Functional interventions

- Lesson in school → Possibility to take a break. Seating in the classroom. Inform classmates and teachers about tics.
- Screen usage → Reduce screen time. Do physical activities prior to screen usage.
 - NOTE! It is not always desirable to remove fun activities.
- Homework → Divide the homework. Schedule. Do homework when the patient is most alert. Many breaks. Sit in a certain place. Help with homework.
- At the dinner table → Early dinner. Siblings should not comment or tease.

Example: Functional interventions

- Getting out of the house in the morning → Write down the morning routine. Prepare clothes and pack the bag the night before. Try to have plenty of time in the morning.
- Bedtime routine → Go to bed earlier. Calm activities prior to bedtime e.g., listen to calm music, massage. Evening walk.
- Being with friends and the patient gets exhilarated → Do not necessarily take action in this situation if the patient does not want to. However, you can encourage the patient to suppress the tics (use ERP).
- In general, stress and fatigue tend to increase tics → Trying to reduce stress and fatigue can be beneficial to the patient.

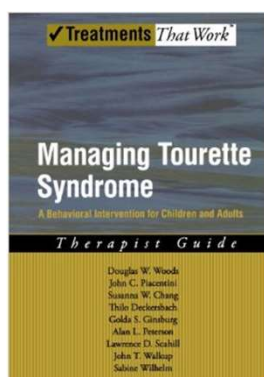
Example: Functional interventions

- The patient avoids/escapes from tasks due to tics, e.g., do not have to do house chores, do not do homework, do not attend activities
 - Risk to do the patient a disservice. The patient should not escape things because of tics, however, family etc. can help so that the conditions are as optimal as possible for the patient.
- Relatives comfort/calm/pay attention to the patient in response to tics
 - Do not comfort/calm/pay attention to the patient as a direct reaction to the tics
 - Family etc. should instead focus on providing positive attention regardless of tics, e.g., decide a priori that the child (daily) will get a massage during bedtime

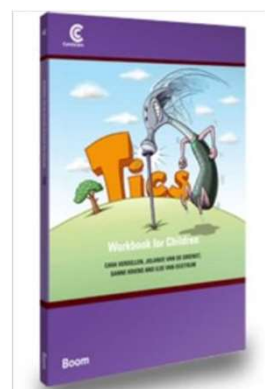
Summary ERP part 2

- Suggested session by session content
- Sessions should primarily include ERP practice
- Vary the ERP practice (and make it fun!)
- Troubleshooting
- Combining ERP with HRT could be helpful in some cases
- With the help of functional analysis and interventions, tics may decrease
- “Basic rule” that family etc. should not comment on the tics

Suggested literature



HRT/CBIT: Woods, D. W. *Managing Tourette Syndrome: A Behavioral Intervention for Children and Adults Therapist Guide*. New York: Oxford University Press, 2008.



HRT and ERP: Verdellen, C., van de Griendt, J., Kriens, S., & van Oostrum, I. *Tics: Therapist Manual*. Amsterdam: Boom Cure & Care, 2011

Naturalistic study of face-to-face behaviour therapy (Sweden)



Child Psychiatry & Human Development
<https://doi.org/10.1007/s10578-020-01098-y>

ORIGINAL ARTICLE



Effectiveness of Behaviour Therapy for Children and Adolescents with Tourette Syndrome and Chronic Tic Disorder in a Naturalistic Setting

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Accepted: 12 November 2020
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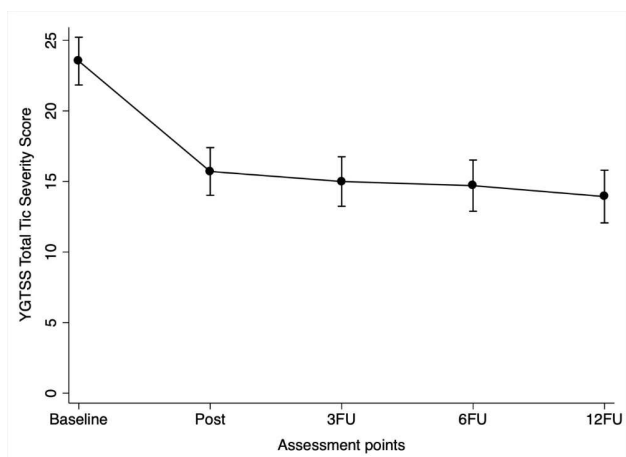
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Results, effectiveness



- Tic severity as measured by the YGTSS-TTSS



Cohen's *d* within group effect size (95% CI) from baseline to post-treatment:

1.03 (0.78 to 1.29)

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RCT of internet-delivered ERP (UK)



Articles

Therapist-supported online remote behavioural intervention for tics in children and adolescents in England (ORBIT): a multicentre, parallel group, single-blind, randomised controlled trial



Chris Hollis, Charlotte L Hall, Rebecca Jones, Louise Marston, Marie Le Novere, Rachael Hunter, Beverley J Brown, Charlotte Sanderson, Per Andréén, Sophie D Bennett, Liam R Chamberlain, E Bethan Davies, Amber Evans, Natalia Kouzoupi, Caitlin McKenzie, Isobel Heyman, Kareem Khan, Joseph Kilgariff, Cristine Glazebrook, David Mataix-Cols, Tara Murphy, Eva Serlachius, Elizabeth Murray



Summary

Background Exposure and Response Prevention (ERP) is a form of behavioural therapy for tics; however, its effectiveness remains uncertain. We aimed to evaluate the effectiveness of internet-delivered, therapist-supported, and parent-assisted ERP for treatment of tics in children and young people with Tourette syndrome or chronic tic disorder.

Lancet Psychiatry 2021
Published Online
September 1, 2021
[https://doi.org/10.1016/S2215-0366\(21\)00235-2](https://doi.org/10.1016/S2215-0366(21)00235-2)

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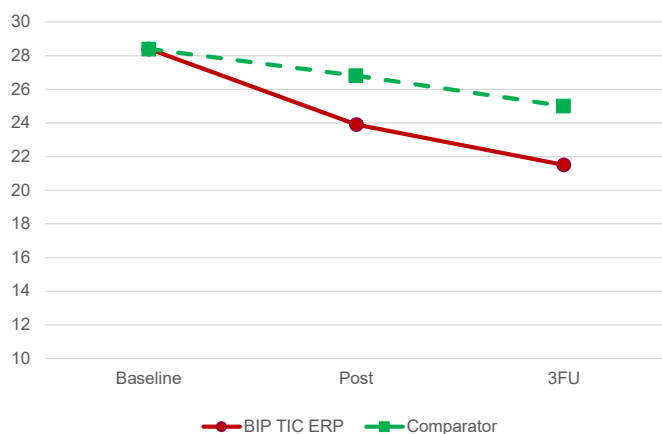
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Results, efficacy



- Tic severity as measured by the YGTSS-TTSS



Between group effect size (95% CI) from baseline to post-treatment (primary endpoint):

0.31 (0.10 to 0.52)

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RCT of internet-delivered ERP (Sweden)



JAMA
Network | **Open**



Original Investigation | Psychiatry

Therapist-Supported Internet-Delivered Exposure and Response Prevention for Children and Adolescents With Tourette Syndrome A Randomized Clinical Trial

Per Andrén, PhD; Moa Holmsved, MSc; Helene Ringberg, MSc; Vera Wachtmeister, MSc; Kayoko Isomura, MD, PhD; Kristina Aspvall, PhD; Fabian Lenhard, PhD; Charlotte L. Hall, PhD; E. Bethan Davies, PhD; Tara Murphy, PhD; Chris Hollis, PhD; Filipa Sampaio, PhD; Inna Feldman, PhD; Matteo Bottai, PhD; Eva Serlachius, MD, PhD; Erik Andersson, PhD; Lorena Fernández de la Cruz, PhD; David Mataix-Cols, PhD

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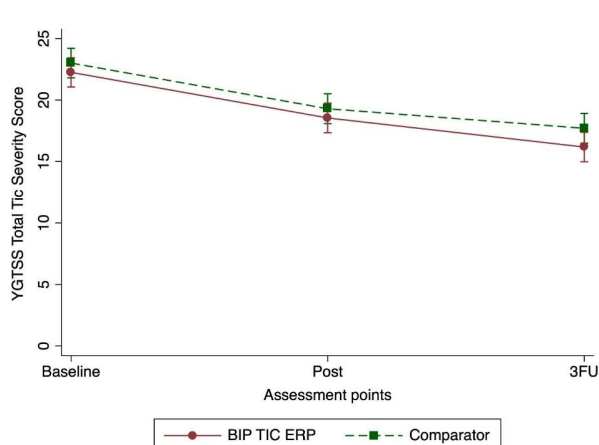
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Results, efficacy



- Tic severity as measured by the YGTSS-TTSS



Within group effect sizes
(95% CI) from baseline to the
3-month follow-up (primary
endpoint):

ERP: 0.60 (0.42 to 0.78)
Comparator: 0.44 (0.28 to 0.59)

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Please write your questions in the chat



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Thank you for participating!

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