

Treating lazy eyes with a joystick

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Four percent of all children suffer from amblyopia, better known as "lazy eye syndrome." Traditional treatment for the condition requires the use of an eye patch, often for months at a time, before the eye is corrected. This can lead to social stigma during a formative part of childhood, and worse, it's not 100% effective.

Now Tel Aviv University's eye and brain specialist Dr. Uri Polat of the Goldschleger Eye Research Institute has developed a computer [therapy](#) that could spare kids from the ugly eye patch, letting them enjoy themselves during therapy. The treatment, currently available for adults only, corrects the activity of the neurons in the [brain](#), the main operator of eye function.

A leading expert in lazy eye syndrome recently assessed Dr. Polat's invention and found that twenty hours in front of Dr. Polat's computer treatment had the same effect as about 500 hours of wearing an eye patch. The review was published recently in Vision Research. Dr. Polat's research group has also reported the new treatment's efficacy in a number of scientific publications, including the [Proceedings of the National Academy of Sciences](#) (PNAS).

Not just any video game will work

In his carefully designed treatment, special and random objects appear, keeping the patient constantly alert and expecting the unexpected. A version of the therapy as a game is now in under development for children.

"As far as I know this is really a one-of-a-kind, non-invasive and effective way to treat lazy eye, without the use of an embarrassing [eye patch](#)," says Dr. Polat. "This is probably the first treatment that attempts to correct lazy eyes in adults, something that doctors had previously given up on. Doctors don't suggest intervention after the age of nine, because it usually doesn't work."

Making eye therapy fun

Taking it from the lab bench to a commercial product, Dr. Polat wants to make sure that the treatment will be as stimulating as a regular video game. The existing game-like therapy he developed for the computer was "a bit boring," he admits, making it hard for some kids to sit through an entire session of treatment, which can be administered by a parent or therapist at home or at school.

That's why he's now collaborating with researchers at Rochester University in New York, where gaming specialists plan to add more entertainment value to the new therapy while keeping all of its therapeutic power.

"You see these poor kids in kindergarten wearing the patch. Everyone hates it, especially the parents who know what it's doing to their kid's self-esteem," says Dr. Polat. "My aim is to not only treat adults, but to treat kids using a computer two or three times a week, one hour each time, without the need for them having to wear a patch."

Dr. Polat's solution currently has the U.S. Food and Drug Administration seal of approval, Dr. Polat adds.

Source: Tel Aviv University ([news](#) : [web](#))

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