

## ‘An important task for pharmacists is to give instructions on how to correctly apply drops’

Because many eye patients do not apply their drops correctly, they have a lot of difficulty with their treatment. They experience serious side effects and sometimes end up in hospital. Caregivers at the Rotterdam Eye Hospital emphasise that correct instructions for applying drops are therefore crucial. "The pharmacist has an important role to play in that."

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A 23-year old young man arrives at the Rotterdam Eye Hospital with his fifth cornea infection. Asked about how he applies his drops, he puts the bottle correctly," says Nora Ooms, nurse at the eye hospital. "When I think about it, it still brings tears to my eyes."

Ooms also made a great impression on the 9-year-old boy who, due to incorrect drop application, which caused the medicine to be absorbed systemically in the body, ended up with a psychiatrist because he had become very depressed. "Fortunately, the psychiatrist immediately made the connection with applying the drops, so the patient could be helped quickly."

### Practice, practice, practice

How do you get the drops in your eye in the right way without infecting it with new bacteria? Most eye patients do not know the correct answer.

According to a study carried out by the eye hospital a few years ago, only 4% of them seemed to apply drops correctly. They usually think that they are doing it correctly and therefore do not consult a health care provider. The incorrect use of eye drops may therefore go on for years, sometimes with some very serious consequences. There is only one way to improve that situation, Ooms, her colleague Marrie Scheltens and pharmacist's assistant Belinda Willemsse of the Eye Pharmacy say in chorus: "Information, information, information. And practice, practice, practice."

About eighteen years ago, eye patients were given eye drops after their discharge from the hospital with no further instruction.

"They had to figure it out for themselves," says Ooms "There was no information or instructions." Given the consequences of bad application of drops, there was at some point the realization that something needed to be done urgently about this. A proper project was set up. An effective method for applying drops was devised at the UMC Groningen (the so-called hand-on-hand method) and subsequently successfully applied at the Rotterdam Eye Hospital.

The hospital developed a website, with an instructional video and app that helps people to apply their drops in a timely and correct manner and provides information about resources. A patient brochure was also introduced. Ooms and Scheltens were also involved in drawing up a Flemish-Dutch protocol from the World Association of Eye Hospitals (WAEH, [www. Waeh.org](http://www.Waeh.org)) to ensure consensus about eye drops both in the hospital and home care.

### Eye-opener

The instruction video in particular is very successful, assures Ooms. It increases awareness and leads to better dropping. "A real eye-opener for many patients, is

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**BOY OF 9  
DEPRESSED  
DUE TO  
INCORRECT  
DROP  
APPLICATION**



Foto Marieke de Looij  
NURSES NORA OOMS AND MARRIE SCHELTENS AND PHARMACIST'S ASSISTANT BELINDA WILLEMSE (FROM L TO R): "CORRECT DROP APPLICATION REQUIRES THE RIGHT INFORMATION AND A LOT OF PRACTICE."

being instructed to press the tear duct closed for at least one minute immediately after applying drops. Many people, including carers don't realise how important that is. It's not, as is often thought, to prevent the fluid running away, but to prevent it ending up in the rest of the body, which can lead to nasty side effects."

For example, a pressure-reducing agent like Timolol causes a change in blood sugar. "If you are diabetic, and your doctor has prescribed you insulin to keep your blood sugars regulated, you may suddenly be confronted by a hypo. If that is not recognized on time, it can be disastrous," warns Scheltens. Ooms points out the influence of Atropine on the cardiac system – for instance arrhythmias – and fatal asthma attacks after using glaucoma drops.

Moreover, according to the Rotterdam care givers it is essential to keep underlining the importance of the right time to apply drops - "twice a day really means exactly every twelve hours" – and of keeping sufficient distance between bottle and eye. Patients often hold the eye-drop flacon as close as possible to the eye, assuming that at least then the drops will, in any case, land on the right spot.

"They forget that this is how they may damage the eye even more and also that the bottle becomes contaminated and that the next time you apply drops, you put the bacteria back into the eye.

For some people, this means they never get rid of their eye infection," says Ooms.

Scheltens: "And men tend to squeeze half a bottle into their eye, giving it a mega overdose." An additional obstacle is that not infrequently people think it's not such a big deal to apply drops irregularly or not at all.

"Many people actually have no idea what is in the drops; they don't look on them as medication. Yet, when it comes to glaucoma treatment, we're talking about extremely strong medication," says Scheltens.

Other important details that are pointed out are to wash and thoroughly dry hands before and after applying the drops, and to put the bottle cap on its side on a clean sheet of paper, never bottom down as that may also cause new infections.

### Drop surgery

The Rotterdam Eye Hospital has a special drop surgery for glaucoma patients, for which Ooms and Scheltens were freed up for several hours every day. "For six months, we saw all the patients who were applying drops for the first time and gave them thorough instructions, as well as patients whose doctors suspected that they were not doing so properly. A month later we saw them again. With most of them, we saw a clear improvement."

## PRESSING THE TEAR DUCT SHUT AFTER APPLYING DROPS IS AN EYE-OPENER FOR MANY PEOPLE

## MEN TEND TO SQUEEZE HALF A BOTTLE INTO THEIR EYE

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To the disappointment of both, surgery hours were cancelled after a while due to the lack of funding. However, patients are now told much sooner how to apply their drops.

"People with cornea damage are with us for five days," says Scheltens. "In the past, just before they went home, they were given quick instructions on how to apply drops. Now we start immediately on their first day. On the second day they are given a brochure and when they are ready to go home, they practice one last time under our supervision. Good monitoring is well worth it."

In the outpatient Eye Pharmacy, a small room on the ground floor of the hospital, about 180 patients come every day and collect their medication. "We'd love to give everyone comprehensive instructions on applying drops, but there's no time for that, so we mainly do it for those who have to apply their own drops for the first time," says pharmacist's assistant Belinda Willemse. "We do continue to monitor the rest, because experience shows that someone who has been applying drops for a long time might need correction at some point because he has become nonchalant and has fallen into old, bad habits."

### Eye drop drama

The pharmacy also has the most common aids, such as a squeezer and eye drop glasses. "One person might think the glasses are great, another might not like them at all," says

Willemse. "The clip is great for a patient with rheumatism, arthritis, or Parkinson's disease. What works best, depends very much on personal preference." Ooms: "Sometimes applying drops is a drama, but in consultation with the pharmacist, often an aid can be found."

Ooms, Scheltens and Willemse would really like to see all pharmacies in the Netherlands giving proper instructions to eye patients on how to apply their drops and keeping a larger selection of aids in stock. "That means that pharmacy teams themselves first need to be properly trained, because now they often give the wrong instructions, or absolutely no instructions," says Nora Ooms. "It should be just as routine as explaining how to use puffers, inject Fraxiparine and inject insulin. Instruction usually takes no more than five minutes, but it can drastically improve the quality of a person's life."

And monitoring is crucial, Marrie Scheltens adds. "If a patient who uses eye drops suddenly arrives with a prescription for a lung condition, alarm bells should sound." Given the growing number of people with eye problems, this is a serious issue, the care providers stress. Ooms: "If all those people continue to apply drops incorrectly, they will keep coming back to the doctor, or even end up in hospital with another serious condition. So applying drops correctly can save society a lot of money."

THE DROP METHOD DEVELOPED AT UMC GRONINGEN IS VERY EFFECTIVE AND IS USED SUCCESSFULLY IN THE ROTTERDAM EYE HOSPITAL. INSTRUCTION TAKES NO MORE THAN FIVE MINUTES, BUT CAN DRASTICALLY IMPROVE THE QUALITY OF A PERSON'S LIFE.

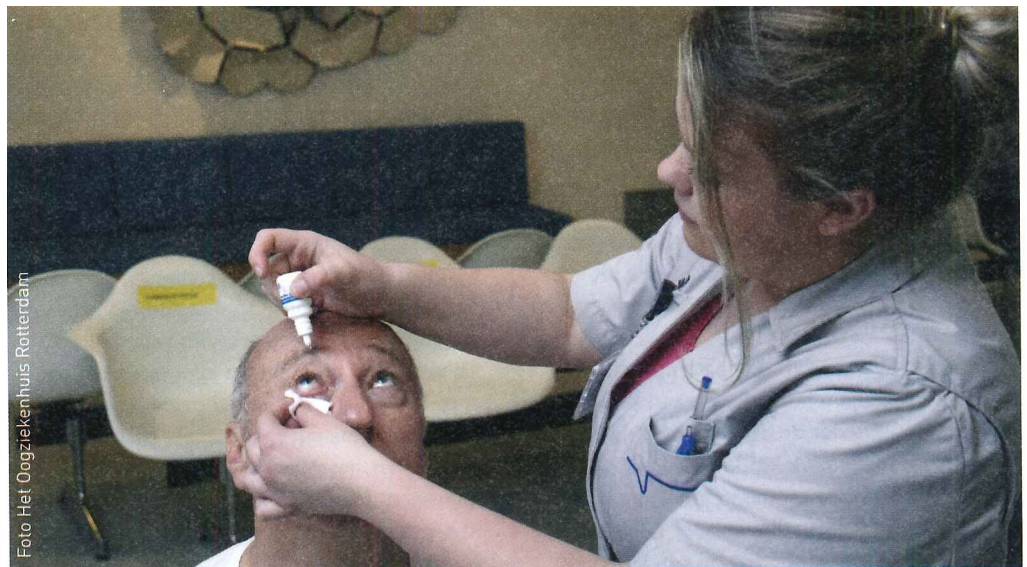


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