

1 Skim the text and put the instructions for the application of contacts in the right order:

_____ **one contact from its case.** Unless the prescription is the same for both, remember to check whether it's for your right or left eye. Always start with the same eye to avoid mixing up your two contacts. Remember to always handle your contacts gently so you don't _____ or damage them.

_____ **Gently place the contact on your eye.** Make sure it is centered over your iris gently sliding it over your eyeball if necessary.

1 **Wash your hands with soap.** Rinse thoroughly to get rid of soap _____. Dry your hands with a towel (since paper towels or toilet paper may leave pieces behind) or, if possible, an air dryer.

_____ **Place the contact on the index finger you're most comfortable with using.** Make sure that the contact is sitting _____ up on your fingertip with none of the side walls sticking to your finger. Hold your finger at eye-level. If the contact looks like a bowl or a sphere cut in half, it is correct. If the edges are _____ out, then it is inside out.

2 Fill in the missing words:

residue *hollow-side* *rip* *flaring* *remove*

3 Discuss the questions with a partner:

- 1) *What is your experience with contacts?*
- 2) *Which contacts do you consider best, daily disposables, semi-weekly ones, or monthly ones? Why?*
- 3) *What do you believe is the future of eyewear?*

4 Watch the video and list the companies/countries working on the development of smart lenses. What are the different functions the lenses can have?

5 Read the sentences from the video and try to guess the missing words. Then listen again and check.

- 1) So it's no wonder people _____ notice when Google announced this lens which can track your glucose through your tears.
- 2) There's a tiny chip _____ on the lens that if it works correctly could eliminate the inconvenience and the pain involved in diabetes management.
- 3) A team from Sweden designed a lens that has a fuel cell that can not only monitor glucose but actually create small _____ of power.
- 4) And other than the obvious medical potential, lot of people have been speculating about what else smart lenses could be used _____.
- 5) The FDA has already approved a swallow-ball microchip the size of a _____ of sand... it can be embedded in drugs and connected to a patch that sends info to your doctor _____ how you're responding.

6 With a partner discuss which of the lenses you would like to have and why. Would you feel secure walking down the streets if you knew people are using these lenses?

7 Read the text and list the different functions of the mentioned lenses. How do they work?

Last week Google and Novartis announced that they're teaming up to develop contact lenses that monitor glucose levels and automatically adjust their focus. But these could be just the start of a clever new product category. From cancer _____ (DETECT) and drug _____ (DELIVER) to reality augmentation and night vision, our eyes offer unique opportunities for both health monitoring and **enhancement**.

One of the Novartis-Google prototype lenses contains a device about the size of a **speck of glitter** that measures glucose in tears. A wireless antenna then transmits the _____ (MEASURE) to an external device. It's designed to ease the **burden** of diabetics who otherwise have to prick their fingers to test their blood sugar levels.

Glucose isn't the only thing that can be measured from tears rather than a blood sample, says Thomas Quinn, who is head of the American Optometric Association's contact lens and cornea section. Tears also contain a chemical called lacryglobin that serves as a **biomarker** for breast, colon, lung, prostate, and _____ (OVARY) cancers. Monitoring lacryglobin levels could be particularly useful for cancer patients who are in _____ (REMIT), Quinn says.

Quinn also believes that drug delivery may be another use for future contact lenses. If a lens could **dispense** medication slowly over long periods of time, it would be better for patients than the short, concentrated doses provided by eye drops, he says. Such a lens is not easy to make, though. The autofocusing lens is in an earlier stage of development, but the goal is for it to adjust its shape _____ (DEPEND) on where the eye is looking, which would be especially helpful for people who need reading glasses. A current prototype of the lens uses photodiodes to detect light hitting the eye and determine whether the eye is directed downward. Leveiller says the team is also looking at other possible techniques.

Google and Novartis are far from the only ones interesting in upgrading the contact lens with such new capabilities. In Switzerland, a company called Sensimed is working on a contact lens that measures the **intraocular** pressure that results from the liquid _____ (BUILD UP) in the eyes of glaucoma patients. And _____ (RESEARCH) at the University of Michigan are using graphene to make infrared-sensitive contact lenses—the vision, as it were, is that these might one day provide some form of night vision without the **bulky** headgear.

A Seattle-based company, Innovega, meanwhile, has developed a contact lens with a small area that filters specific bands of red, green, and blue light, giving users the ability to focus on a very small, high resolution display less than an inch away from their eyes without **interfering with** normal vision. That makes tiny displays attached to glasses look more like IMAX movie screens, says the company's CEO, Steve Willey. Together, the lens and display are called iOptik.

Plenty of challenges still remain before we're all walking around with glucose-monitoring, cancer-detecting, drug-delivering super night vision. Some prototypes out there are unusually thick, Quinn says, and some use traditional, rigid electronics where clear, flexible alternatives would be preferable. And, of course, all will have to pass regulatory approval to show they are safe and effective.

8 Read the text again and fill in the gaps.

9 Check the meaning of the highlighted words and use your own words to describe it.