Albumin structure and function pdf

The symptoms of kidney disease are difficult to understand when we do not appreciate the role of the kidneys in our bodies. This article explains what kidneys do and how they perform their function. PIXOLOGICSTUDIO/SCIENCE PHOTO LIBRARY/Getty Images Let's get grammar straightened at the beginning. You may have heard the terms kidney, nefrological, etc. when you hear doctors talking about kidneys. The term kidney is used alternately to refer to something to do with the kidneys. The word comes from the Latin word for kidneys, Rene. Similarly, nefros is the Greek term for kidneys, while logos refer to the study. Thus, Nefrology is a drug that deals with kidney disease treatment. And nephrologists are specialized doctors who deal with medical treatments for kidney disease, kidney transplantation, and hypertension. A few bean-shaped organs, the kidneys sit on the sides, closer to your spine than your stomach. They are located just below your diaphragm and rib cage. They usually range from 8 to 14 centimeters (or 3 to 5.5 inches). Each kidney weighs between 120 grams (about 1/4 lbs) and 170 grams (0.4 pounds). These numbers vary depending on a person's size and abnormal size of the kidneys may be a sign of kidney disease. About 380 gallons (1,440 liters) of blood flow through the kidneys every day. Your kidneys are your quiet workhorses who work 24x7 to clean your blood with impurities and toxins that accumulate in your body's metabolism. This residual fluid, which we know better than urine, is excreted. However, the role of the kidneys also extends beyond simply making urine. They have their own bodies in their own laboratories that test their blood constantly to make sure that each electrolyte concentration is in a specific range that is required for the body to function. For example, let's consider electrolyte in the blood, such as potassium. Potassium is an electrolyte, the concentration of which must be in a close range in order for the heart to produce its normal electrical impulses. These impulses cause the heart to beat the set rhythm or pulse. So high, or low potassium can interfere with this power generation and cause your heart to go into an abnormal rhythm. This abnormal rhythm, called arrhythmia, is life-threatening and can cause a person to die in a matter of seconds. However, this does not happen under normal conditions, because at the moment the kidneys detect an increase in blood potassium concentration, they dump extra potassium in the urine, keeping potassium levels constant in the blood. If it wasn't for your kidneys, the typical meal that you eat could prove to be a life-threatening experience because of its potassium levels. Another important function of the kidneys is to maintain blood concentration. The kidneys achieve this by maintaining/regulated by your kidneys. The ability of the kidneys to make these changes is one of the reasons life was able to adapt from the oceans to earth is back. (For anyone who is interested in reading further about the kidneys' role in evolution, check out a seminal piece of work called the Fish Philosopher. This was a book written by eminent kidney physiologist Homer Smith, MD, who was a professor of physiology at New York University School of Medicine. The full text of the book is available). Here are some other roles that kidneys earn: They produce a hormone that is important to make red blood cells, called erythropoietinThey make sure your bones remain healthy, producing a form of DNad dump excess acid that is generated from normal metabolism, out of your systemVery important, they control your blood pressure As you can imagine all these functions can go haywire kidney disease, thus leading to the usual signs and symptoms that one of the patients with kidney function. Thanks for the feedback! What are your concerns? Verywell Health uses only high-quality sources, including peer-reviewed studies, to support the facts in our articles. Read our editorial process to learn more about how we control fact checking and keeping our content accurate, reliable, and reliable. Guyton and Hall's textbook on medical physiology. solar22/Getty Images Members of the animal kingdom use different strategies to detect light and focus on it to form images. Human eyes have camera-type eyes, which means they work like camera lenses focusing on light onto the film. The cornea and lens of the eye have a similar camera lens, while the retina of the eye is like a film. The main parts of the human eye are the cornea, iris, student, watery humor, lens, vitreous humor, retina, and optic nerve. Light enters the eye passing through the transparent cornea and watery humor. The iris controls the size of the pupil, which is the aperture that allows light to enter the lens. The light is focused on the lens and goes through vitreous humor in the retina. Rods and cones in the retina translate light into an electrical signal that moves the optic nerve of the brain. To understand how the eye looks, it helps to know the structures and functions of the eye: Cornea: Light enters through the cornea, transparent outer cover of the eye. The eyeball is rounded, so the cornea acts as a lens. It bends or damages the light. Watery humor: the fluid under the cornea has a composition similar to that in the blood plasma. Watery humor helps shape the cornea and provides food to the eye. Iris and Pupil: Light Passes and watery humor through an ava named student. The size of the pupil is determined by the iris, a contractile ring, which is bound by the colour of the eyes. As the student expands (getting bigger), more light enters the eye. Lens: While most of the focus light is done on the cornea, the lens allows the eye to focus on either nearby or distant objects. The clithal muscles surround the lens, relaxing to flatten this image of distant objects and subscriber to thicken the lens image of close-up objects. Glass cooler: a certain distance is necessary to focus light. A glass cooler is a transparent watery gel that supports the eye and allows for this distance. The cover on the inner back of the eye is called the retina. When light strikes the retina, two types of cells are activated. Rods detect light and dark and help form images in low-light conditions. Cones are responsible for seeing the color. The three types of cones are called red, green and blue, but each actually detects the wavelength range, not these specific colors. If you focus on the object clearly, the light hits an area called fovea. Fovea is full of cones and allows for sharp vision. Rods outside fovea are largely responsible for peripheral vision. Rods and cones convert light into an electrical signal that is transferred from the optic nerve to the brain. The brain translates nerve impulses to form an image. Three-dimensional information comes from comparing the differences between images formed by each eye. The most common vision problems are myopia (myopia), hyperopia (foresight), presbyopia (age-related foresight) and astigmatism. Astigmatism results when the curvature of the eye is not truly spherical, so light is focused unevenly. Myopia and hyperopia occur when the eye is too narrow or too wide to focus light onto the retina. In myopia, the focal point is before the retina; in farsightedness, this is the last retina. Presbyopia, the lens is rigid so it's hard to bring nearby objects into focus. Other eye problems include glaucoma (increased fluid pressure that can damage the optic nerve), cataracts (blurring and hardening of the lens) and macular degeneration (retinal degeneration). The functioning of the eye is quite simple, but there are some details that may not be known: the eye works exactly like the camera in the sense that the image formed by the retina is upside down (upside down). When the brain translates the image, it automatically flips it. If you wear special goggles that make you look everything upside down, after a few days the brain will adapt, again showing you the right view. People can't see ultraviolet light, but a person's retina can detect it. The lens absorbs it before it reaches the retina. The reason people evolved can't see UV light is because light has enough energy to damage rods and cones. Insects perceive ultraviolet light, but their compound eyes don't focus as sharply as human eyes. energy spreads across a larger area. Blind people who still have eyes perceive the difference between light and darkness. There are special cells in the eyes that detect light but are not bound to form images. There's a little blind spot on every eye. This is the point at which the optic nerve attaches to the eyeball. The hole in the visual area is not noticeable because each eye fills with another blind spot. Doctors can't transplant a healthy eye. The reason is that it is too difficult to restore the million-plus nerve fibers of the optic nerve nerve nerve nerve nerve. Babies are born with full-size eyes. Human eyes remain about the same size from birth to death. Blue eyes do not contain blue pigment. The color is due to Rayleigh's dispersion, which is also responsible for the blue color of the sky. Eye colour may change over time, mainly due to hormonal changes or chemical reactions in the body. Bito, LZ; Matheny, A; Cruickshanks, KJ; Nondahl, DM; Carino, OB (1997). The color of the eyes changes from a previous childhood. Ophthalmology archives. 115 (5): 659–63. 1990 goldenpp, T. H. (1990). Optimization, restriction and history of eye evolution. Quarterly biology review. 65(3): 281–322. 281–322.