

Time	Narration
00:01	Welcome to the <b>Spoken Tutorial</b> on the importance of <b>Sulphur</b> .
00:06	In this tutorial we will learn about:
00:09	Benefits of <b>Sulphur</b> .
00:12	Symptoms of its deficiency.
00:15	<b>Sulphur</b> rich food sources.
00:18	<b>Sulphur</b> is the third most abundant mineral found in our body.
00:24	Most of it is derived from <b>sulfated amino acids</b> .
00:30	<b>Amino acids</b> make up the proteins.
00:34	There are 22 <b>amino acids</b> .
00:38	Out of 22, a few of them have <b>Sulphur</b> .
00:42	The most important <b>sulfated amino acids</b> are <b>methionine</b> and <b>cysteine</b> .
00:50	<b>Methionine</b> cannot be synthesized in the body.
00:54	Hence it has to be taken from the diet.
00:57	On the other hand, <b>cysteine</b> is synthesized in our body.
01:03	However it requires a steady supply of <b>Sulphur</b> .
01:08	<b>Methionine</b> and <b>cysteine</b> cannot be stored in the body.
01:13	The excess amount is excreted through urine.
01:18	Otherwise it gets stored in the form of <b>glutathione</b> .
01:24	<b>Glutathione</b> is an <b>antioxidant</b> produced in the liver.
01:29	It protects the cells from damage and against various diseases.
01:35	It also helps to remove toxins from the body.
01:40	Many other compounds have <b>sulphur</b> too.

01:44	Let us have a look at the importance of those compounds.
01:48	I will first tell you about <b>keratin</b> .
01:52	<b>Keratin</b> is found in the outer layer of the human skin.
01:57	For healthy hair, nails and cell growth we need <b>Keratin</b> .
02:02	<b>Chondroitin sulfate</b> is another compound that has <b>sulphur</b> .
02:08	It delays the breakdown of cartilage in joints.
02:13	Improves joint mobility.
02:16	Might help in relieving pain caused by <b>osteoarthritis</b> .
02:22	<b>Osteoarthritis</b> is a condition where joint cartilage begins to break down.
02:29	Another <b>sulphur</b> containing compound is <b>alpha lipoic acid</b> .
02:35	Energy production and enzyme function requires <b>alpha lipoic acid</b> .
02:41	It also helps in lowering blood sugar levels.
02:45	Apart from <b>proteins</b> , some <b>B-vitamins</b> also contain <b>Sulphur</b> .
02:51	One of them is <b>vitamin-B1</b> which is also known as <b>Thiamine</b> .
02:58	We require <b>Thiamine</b> for normal development and growth.
03:04	It is also required during reproduction and breastfeeding.
03:09	<b>Biotin</b> is another <b>B-vitamin</b> which has <b>sulphur</b> .
03:15	<b>Biotin</b> is important for healthy hair growth.
03:19	It plays a role in cell signaling and the regulation of <b>genes</b> .
03:25	Let us now see the several roles of <b>sulfur</b> in our body.
03:31	<b>Sulphur</b> helps in the process of digestion.
03:35	Protecting the lungs from mucus formation
03:38	and infections.

03:40	Maintaining healthy eyes.
03:43	Reducing the chances of development of cataract in the eyes.
03:49	Developing the central nervous system and
03:53	building a strong immunity.
03:56	<b>Insulin</b> production also requires <b>sulphur</b> .
04:01	<b>Sulphur</b> is also required during synthesis of <b>collagen</b> .
04:07	<b>Collagen</b> is a <b>protein</b> found in bones, muscle and skin.
04:14	It strengthens the skin.
04:16	Production of hormones like <b>cortisol</b> also requires <b>sulphur</b> .
04:23	<b>Aldosterone</b> and <b>testosterone</b> are other examples.
04:28	I will now tell you the various functions of these hormones.
04:33	<b>Cortisol</b> helps to control blood sugar levels
04:36	and reduces inflammation.
04:40	It is also called a stress hormone.
04:44	<b>Aldosterone's</b> main role is to regulate blood pressure.
04:49	<b>Testosterone</b> is a male sex hormone.
04:54	It helps in building bone mass and muscle density.
04:59	Let us look at the symptoms of <b>sulphur</b> deficiency.
05:04	Deficiency of <b>Sulphur</b> causes wrinkling of skin,
05:08	brittle hair and nails.
05:11	Joint pain, convulsions and memory loss are also seen.
05:17	Apart from this, toxins accumulate in the body.
05:21	This can increase the risk of cancer.
05:25	The risk of type 2 diabetes and heart diseases also increases.

05:32	Gastric issues, rashes and delayed wound healing have also been observed.
05:39	We will now look at some food sources rich in <b>Sulphur</b> .
05:45	There is no recommended dietary allowance for <b>sulphur</b> .
05:50	It is recommended to consume <b>sulphur</b> rich food daily.
05:55	Foods rich in <b>methionine</b> and <b>cystine</b> are good sources of <b>sulphur</b> .
06:02	Eggs, fish, and chicken are good sources of <b>methionine</b> .
06:08	Nuts, milk, seeds and grains also contain <b>methionine</b> .
06:15	Chicken, cheese, eggs, and legumes are good sources of <b>cystine</b> .
06:21	Next we will look at the <b>vitamin</b> rich food sources that have <b>sulphur</b> .
06:27	Whole grains, chicken, beans and nuts are sources of <b>thiamine</b> .
06:34	Whereas goat liver, egg, fish, nuts and seeds have <b>biotin</b> .
06:42	<b>Sulphur</b> is also present in garlic, onion, cabbage, and cauliflower.
06:49	Remember to include these foods in your daily diet for good health.
06:55	This brings us to the end of this tutorial.  Thanks for joining.