

<u>Drug Information Center/ KAUH</u> <u>A new study found that Spironolactone might be effective in</u> Autistic Disorder

Autism spectrum disorders is a group of developmental problems that lower the degree of social interaction, communication and lingual skills, usually appears during the first three years of life.1

Autism is an increasing problem by means of number of cases detected every year, and although it is incurable, a good, early management can really improve the symptoms.1

Studies show that Autism is characterized by an altered immune system which involves neuroinflammation. Moreover, many autistic children exhibit significantly higher than normal androgen levels.2

Spironolactone which is an aldosterone antagonist and potassium-sparing diuretic with a good safety profile possess potent anti-inflammatory and immune modifying properties.2

Japanese researchers concluded that spironolactone is the most potent antiinflammatory they studied among the medications used to reduce cardiovascular risk factors related to inflammation.3

In addition, spironolactone exhibits strong anti-androgen effect that might enhance its action in autism, especially in patients with high androgen levels. Such properties suggest that Spironolactone could be an excellent medical intervention for autism spectrum disorders.2

In conclusion, spironolactone is a promising treatment to be used in autism, but more researches are needed to further clarify the efficacy and safety of spironolactone use in autistic disorder.

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References:

1- Autism diseases and conditions, 2014, March, 9

http://www.mayoclinic.org/diseases-conditions/autism/basics/definition/con-20021148

- 2- Bradstreet JJ^1 , Smith S, Granpeesheh D, et al, "Spironolactone might be a desirable immunologic and hormonal intervention in autism spectrum disorders", <u>Med Hypotheses.</u>, 2007; **68**(5):979-87
- 3-Case study: blood pressure drug reduces autistic symptoms, 2014, March, 9 http://www.autism.com/ari/newsletter/204/page2.pdf