

Ministry of Higher education  
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College of Dentistry



# **Immunological and Physiological, Changes in Salivary Sample of Children With autism Spectrum disorder**

**A thesis  
submitted To The Council Of college Of Dentistry At The University  
Of Baghdad In Partial Fulfillment Of The Requirements For The  
Degree Of Master Of Science In Oral Physiology**

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## Abstract

Autism, which is considered as a severe neurological disorder, presents in early child's life. There is a severe defect in contact and behavior. It is considered as a multi-factorial disorder, which is influenced by genetic, environmental and immunological factors which are linked by oxidative stress. Diagnosis of oral manifestations; measurement of stress biomarker in saliva has to be evaluated and measured in order to be used as a diagnostic aid because saliva is considered as ultra-filtrate of serum and is inexpensive, noninvasive and accessible diagnostic methodology.

### **Aim of the study:**

To assess any oral manifestations associated with autism and the value of saliva as a diagnostic tool, by measuring some biochemical markers; to provide a greater mechanistic insight into autism spectrum disorder pathology.

### **Materials and Methods:**

Fifty autistic children and thirty sex and age-matched healthy controls, aged between (6-12) years were enrolled in this study. Dental health status; saliva level of: IGA, lactoferrin and cortisol measured for all participants.

### **Results:**

Current study revealed that caries prevalence and severity of permanent teeth in autistics (DMFT: mean=1.680) were significantly lower than in healthy children (DMFT: mean=2.367) with  $P=0.003$ ; while for deciduous teeth, the prevalence and severity of caries (dmft: mean=1.420) were lower than that of healthy children (dmft :mean=2.033,) but the difference was statistically not significant ( $p = 0.057$ ). There is significant increased production of stress biomarker cortisol (mean=5.043) in autistics than in healthy ones (mean=1.750). IGA and lactoferrin were decreased in autistics (mean=179.620, 80.291) than healthy children (mean=270.272, 81.848) respectively.

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**Conclusions:**

The study results revealed that autistic children sample in Iraq was nearly caries-free. Saliva can be considered as an accompanying diagnostic aid for measurement of stress markers.