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## Research Article

# OREOCHROMIS NILOTICUS [ LINNAEUS, 1758] ITS BIOMEDICAL BENEFITS FOR CHILDREN'S

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## ABSTRACT

Nile Tilapia (*Oreochromis niloticus*) it is fresh water & estuarine species. By lipid test profile, Analytical method, Chromatography method, Enzyme method, It has pharmaceutical potential to prevent Polyunsaturated fatty acid, Vitamin B12, Vitamin D etc. We found in Nile Tilapia have biomedical and nutraceutical products, Nile tilapia highly recommended for supplementary food for children.

## KEYWORDS

Biochemical properties, pharmaceutical potential, Tropical fresh water fish.



## INTRODUCTION

Common name Nile Tilapia (*oreochromis niloticus*) identified by colour, morphometric & meristic

characters by Day volume. It is commonly called as “paplet” in Maharashtra, India. Native of Tilapia middle

East & Africa, but at present fish is spread up 80 countries worldwide. Bronze to brownish-gray dorsally & laterally, white ventrally. It is tropical and estuarine species. Fish have more tolerance to live in poor water quality. It is hard & desirable Aquaculture species. Fish is herbivorous in habit. It is valuable food fish role of functional food, which provide health benefit beyond basic nutrition. It is good source of medicinal food because it contains high level of Omega -3 & Omega-6 fatty acid, EAA, Vitamin B12, Vitamin D which are most important for children.

### **Biochemical Properties of Nile Tilapia: -**

#### **Collection of Fishes:**

In the early morning with the help of fisher men Nile tilapia (*Oreochromis niloticus*) collected from Wadi Ponds, Shekhachi wadi ponds, Nanded Maharashtra, India. The fishes transferred to College Lab, pathology Institute for experiment, in Maharashtra, India. By Lipid Test Profile, Analytical method, chromatography method, enzyme method we found below properties.

Nile Tilapia fish useful source of proteins ( 21% to 22.5% ) lipids, Vitamin B12, DHA, EAA Omega-3 & Omega-6 fatty acid . Fish indicate that fish is useful for kids for supplementary food Human diet.

#### **Health Benefits/Nutrition**

##### **Arachidonic acid [AA]:**

Arachidonic acid supplementation of the diets of Kids & healthy adults & solve skin problems. Arachidonic acid recommended for supplementary food.

##### **DHA- (omega-3 fatty acid)**

Omega -3 fatty acid develop brain, to solve the sleep problems in children's, one of the most common

neurodevelopmental disorders of childhood, proper nutrition, brain boosting supplements. In particular, docosahexaenoic acid (DHA) long chain omega-3 fatty acid, is important for brain and eye development. Additionally, DHA play a significant role in mental health throughout early childhood and even in to adulthood. DHA may also reduce the risk of heart and circulatory disease by decreasing the thickness of the blood and lowering blood levels of triglycerides,

Glycine: Glycine is an amino acid, this amino acid may also protect your liver from alcohol induced damage and improve sleep quality and heart health.

Nutrition: Nile Tilapia is high in Vitamin B12, which is helpful for kid's nervous system & produce red blood cells. It is also low in fat, carbohydrates and sodium making it a healthy addition to any meal.

Health Benefits: Nile Tilapia have high percentage of Vitamins & Minerals like Vitamin B 12, Vitamin D which are useful for kids for body needs to function.

##### **Cardiovascular:**

In Nile Tilapia Thromboxane biosynthesis is present (Omega-3 fatty acid) Skin extract from fish

Cardio toxic factor oil supplementation is widely regarded as an effective preventive measure against cardiovascular problems. AA [ Arachidonic acid] present in Nile Tilapia reduces coronary heart disease.

##### **Skin Diseases:**

In Tropical and Sub-tropical area most of people suffering from skin diseases, like pimples, sclerosis etc. Nile Tilapia useful in these Circumstances and help patients as well support for the maintenance of healthy skin of the human beings.

Especially its action is due to the presence of docosahexaenoic [DHA] AA [Arachidonic acid] which are present in Nile Tilapia. AA metabolism altered skin diseases. From fish oil [EPA, DHA] lead modulate prostaglandin metabolism and decrease the Symptoms of such disorders.

### CONCLUSION

Nile Tilapia fish low in mercury high in protein and packed with essential nutrients for growing kids (Young once) Fish contains lots of vitamin, B12, especially protein, calcium, unsaturated fatty acid an impotent nutrient for brain development and healthy blood. Fish have selenium which support a healthy immune system and have vitamin D, Magnesium, Iodine, Zinc all are important for development of brain. The nutritional benefits of fish consumption in children has been reviewed. The present paper explores the nutritional value of fish as approach to nutrition in children and its benefits. Fish have high percentage of amino acid, (EAA) polyunsaturated fatty acid (PUFAs) which need to development of brain, Hence, while fish consumption is highly recommended for children nutrition.

Selenium/Choline: Selenium give boosting immune function, improving hair loss problem, to become a mussel strong, healthy thyroid. Choline gives to kids, B 12, develop brain & nerve system, healthy function of liver.

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### REFERENCES

1. Gibson RA. Australian fish-An excellent source of both arachidonic acid and polyunsaturated fatty acids. *Lipids*. 1983;18:743-752
2. MAM Shafri and MJ Abdul Manan.” Therapeutic potential of the haruan
3. (Channa stratus): from food to medicinal uses. “*Malays J Nutr*.2012;18:125-136
4. Dhanaraj M. Haniffs MA, Sing SVA, Ramakrishna CM, Manikandarja D & Milton MJ. Antibacterial activity of skin and mucus of five different fresh water fish species Vicz.C.Striatus, C. microplates, C.Marulius, C.puncttatus and C. gachua *Mal J Science* 2009: 257-262.
5. Jayaram, K.C. (1999) The fresh water fishes of the Indian Region. Narendra publishing House Delhi 110006, India. 79,551
6. Kapoor M, Kojima Appleton kawai S & Coffered I.J, Major enzymatic pathways in dermal wound healing: Current understanding and future the rapecutic target. *Cropping Investing Drugs*. 2006; 7: 418-422
7. Tiwari, S and Singh, A (2004) Toxic and Sablethal effects of alexandrine on biochemical parameters of fresh water air breathing murrel Channa Punctatus (Bloch). *Indian Journal of Experimental Biology* 42, 413-418.