



Health Aspects of Camel Meat: A Review of Literature

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Abstract | With the increasing human population, the demands for meat and meat product is high and is one of the major challenges to the food security. Camel meat is an excellent source of protein with many medicinal benefits for human health and may propose a solution to sustainably secure food supply. This review highlights some of these concepts and future areas of research that facilitate the exploitation of camel meat in the food industry.

Keywords | Camel meat, Glycogen, L-carnitine, Carnosine, Camel

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INTRODUCTION

The world has witnessed substantial changes in the global meat market with increasing demand for healthy meat products (Menkhaus et al., 1993). Health is the main factor influencing consumer demand for meat products. As result of interest from the preference shift of consumers, the healthy meat products such as camel meat products should be stimulated. It is now recognized by researchers and consumers that there is a good match between camel meat and their preferences for lower risk and more healthy products (Kadim et al., 2014). Camel meat is an excellent source of protein with many medicinal benefits for human health. The culinary and cooking practices as well as the palate form eats in several countries have been evolved to prefer camel meat to other meat animal species due to health benefits. Dromedary camel meat has other medical qualities including protecting against cancerous tumors because it contains unsaturated fatty acids like linoleic. Camel meat can also be used as a cure for exhaustion and fatigue because it contains energy (glycogen) needed by body cells. Glycogen is easily absorbed and metabolized in the body, and is converted to glucose which activates nerve as well as other cells. Camel meat has been used since the late sixteenth century in traditional Chinese medicine. It has been used to improve resistance to disease, to strengthen the muscles and bones, to moisten the

skin and to relieve internal pain (Khan et al., 2016). Camel meat can be used in many food industries such as sausage, corned meat and shawarma.

BIOACTIVE COMPOUNDS

Several bioactive compounds are nutritionally important and can potentially be useful in marketing dromedary camel meat. Carnosine (β -alanyl -L-histidine) is important dipeptides and function as antioxidants and putative neurotransmitters in the brain. Dromedary camel meat has 164.9 mg carnosine/100g and 236.9 mg anserine/100g fresh weight. Carnosine has been proven to scavenge reactive oxygen species as well as alpha-beta unsaturated aldehydes formed from peroxidation of cell membrane fatty acids during oxidative stress. Carnosine can increase the Hay flick limit in human fibroblasts, as well as appearing to reduce the telomere-shortening rate. L-carnitine plays an important physiological role in producing energy during exercise through transporting long-chain fatty acids across the inner mitochondrial membranes. It is Clear that dromedary camel meat could potentially be one of the best sources of taurine L-carnitine (12.6 μ mol /g fresh weight). Taurine has many fundamental biological roles, such as conjugation of bile acids, anti-oxidation, osmoregulation, membrane stabilization, and modulation of calcium signaling. It is essential for cardiovascular function, and development and function of skeletal muscle, the retina and the

HEALTH ASPECT

Meat in general is considered a functional food for cures of many ailments and for improved performance in many cultures around the world (Migdal and Živković, 2007). Camel meat is believed to have medicinal effects (Bin Saeed et al., 2005). Kadim et al. (2014) indicated that camel meat has traditionally been used to cure the following ailments: (1) seasonal fever, sciatica and shoulder pain, as well as for removing freckles; (2) camel meat soup was used to cure corneal opacity and to strengthen eyesight; (3) Camel fat was used to ease hemorrhoid pains and the hump fat was used to remove tape worm; and (4) dried camel lungs used to be prescribed as a cure for asthma, especially if taken with honey. Traditionally in countries rearing camels, their meats were used as remedy for the hyper acidity, hypertension, pneumonia, respiratory disease and aphrodisiac. Studies have shown that camel meat can be used as a cure for cold and sciatica, stroke, cancer, and infections, especially among older people because this meat can safeguard muscle health (Kadim et al., 2014).

ANGIOTENSIN I- CONVERTING ENZYME INHIBITORY (ACE)

ACE is a central component of the renin-angiotensin in system to control blood pressure by regulating the volume of fluids in the body. It converts the hormone angiotensin-I to the active vasoconstrictor angiotensin II. Therefore, ACE indirectly increases blood pressure by causing blood vessels to constrict. The ACE inhibitor concentrations in Bactrian meat are ranged from 65.1-72.5%, which can effectively reduce systemic vascular resistance in patients with hypertension, heart failure or chronic renal disease through decrease production of angiotensin II. ACE Inhibitors also increase blood flow, and can protect your kidneys from the effects of hypertension and diabetes.

CONCLUSIONS

The dromedary camel meat has a favorable nutritional pro-

file for human. The camel meat is also an important source of healthy compounds and can be competitively marketed alongside of other meats. It is important to encourage the consumption of dromedary meat and to devise a national plan to raise awareness among the public due to its health benefits and uses at a time when the demand for healthy food is greater than ever.

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interests.

AUTHORS CONTRIBUTION

Both authors equally contributed to this work.

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