Diabetes Reversal Using African Bitterleaf: Some Scientific Evidence

Previously uncommon in the region, cases of diabetes across Africa have begun to exacerbate as more and more Africans adopt Western lifestyles and diets. While the disease is more rampant among middle age and older populations, very young children are now daily being diagnosed as diabetic in different parts of the continent. In African traditional pharmacology, water extracts from the leaves of African bitterleaf, scientifically known as Vernonia amygdalina, have been used to successfully treat diabetes for years. In recent times, researchers, aware of the successes recorded in African traditional medicine, have conducted scientific studies to that effect. In this article, we shall look at four scientific research papers published in international peer-reviewed journals, which all report that water extracts from bitterleaf contain some compounds that, when used appropriately, are able to reverse diabetes in sufferers.

Being diabetic means that the glucose or blood sugar in an individual's bloodstream is above normal, which can pose serious health risks to the entire body system while targeting specific organs of the body for extreme damage. Complications that can arise from diabetes include kidney damage, eye damage, feet damage, cardiovascular diseases, nerve damage, depression, Alzheimer's, hearing problems and various skin conditions, to mention a few. Diabetes is known as the silent killer since many sufferers are undiagnosed. There may be no symptoms in the early stages of the disease, although that does not mean the body is not being harmed at that point. As diabetes progresses, there might be mild symptoms that can present in the form of tiredness, weight loss, disproportionate thirst, continuous hunger and frequent urination. The

disease has led many Africans to their early grave and incapacitated numerous others.

The first research article we shall look at is published in Biomedical Central's Complementary and Alternative Medicine Journal. In the study, researchers administered extracts from the leaves of the African bitterleaf on diabetic rats for a period of 7 – 14 days. Afterwards, studies were conducted on select indicators of diabetes, while the body weight and blood glucose were monitored. The results indicated that bitterleaf achieves anti-diabetic action by suppressing the production of new glucose in the liver.

The second research article is published in the Journal of Food Chemistry. The researchers focused on studying the anti-diabetic properties of the leaves of Vernonia amygdalina. Extracts from the leaves of bitterleaf were administered on diabetic rats for a period of 14 days, and it was established that there are anti-diabetic components in V. amygdalina, thereby establishing its age-old use in African traditional medicine.

The third article we shall examine was published in the Metabolic Brain Disorder Journal. The researchers investigated the ability of African bitterleaf to stimulate the brain glucose uptake in rats. This research is necessary because, in Type 2 diabetes sufferers, glucose uptake is usually reduced, leading to such diseases as Alzheimer's. Researchers used a hot infusion (tea) of Vernonia amygdalina leaves in this research. Rat brain tissues were incubated for 2 hours in the hot infusion of Vernonia amygdalina leaves, with glucose being present. Another set of rat brain tissues were incubated in glucose only (i.e., without bitterleaf extracts). The results indicate the "brain glucose uptake stimulatory and neuroprotective effect of V. amygdalina," essentially lending credence to the age-old use of bitterleaf as a diabetes prevention and treatment option in traditional African pharmacology.

The last article we shall look at is published in the Journal of Diabetes Research. In the study, researchers examined the potency of old and young leaf extracts of Vernonia amygdalina in the treatment of diabetes in rats. In the study, which lasted 4 weeks, 56 diabetic rats were divided into nine groups as follows:

Group 1 (normal control) – rats not induced with diabetes.

Group 2 (negative control) – rats induced with diabetes: fed on saltwater.

Group 3 (positive control) – rats induced with diabetes: given a standard diabetic drug (glibenclamide 10 mg/kg).

Group 4 – rats induced with diabetes: given extract of old V. amygdalina (10 mg/kg).

Group 5 – rats induced with diabetes: given extract of old V. amygdalina (30 mg/kg).

Group 6 – rats induced with diabetes: given extract of old V. amygdalina (300 mg/kg).

Group 7 – rats induced with diabetes: given extract of young V. amygdalina (10 mg/kg).

Group 8 – rats induced with diabetes: given extract of young V. amygdalina (30 mg/kg).

Group 9 – rats induced with diabetes: given extract of young V. amygdalina (300 mg/kg).

Results indicated the presence of the same diabetic fighting phytochemicals in both old and new leaves of the African Bitterleaf although certain flavonoids are present only in the old leaves.

As far as dosage is concerned, different African traditional pharmacologists have different dosage recommendations for

their patients. Scientifically, bitterleaf extracts research has not gone through human clinical trials in order for the permissible dosage to be established. However, experience, research and anecdotal evidence point to the fact that drinking bitterleaf water extract over a period of time is beneficial as a supplement in the preventive treatment of various diseases. Researchers have proven that bitterleaf water extract is non-toxic, which makes it safe for regular consumption as part of a healthy diet. Extraction can be done by blending the leaves in water and draining it to make it ready for drinking. It also helps to squeeze the leaves in running water afterwards in order to extract more of the juice.

Essentially, however, it remains important for Africans to reverse the trend of adoption of western foods making their way to the plates of most families across the continent. There is a popular saying that “you are what you eat,” and that is especially true where diabetes is concerned. Presently, white rice and white flour-based foods (such as bread, spaghetti, chapatti, mandazi) are among the top staple foods consumed in African households. In some countries, even fufu, previously made of wholesome tubers and grains, are now made of white wheat flour (semolina/semovita in West Africa etc). Sugar-laden drinks, formerly considered a luxury, are now more affordable to many and consumed more regularly. For snacks, children are daily given so-called packets of juice – which in many cases are mostly sugar – and some white wheat flour products still laden with sugar. Indeed, there is a popular misconception that children need to ingest sugar since they are growing and need a lot of energy. The exponential rise in diabetes across age brackets is only one of the numerous outcomes of this unhealthy diet trend.

Africans must go back to eating wholesome foods, such as vegetables, fruits, tubers, legumes. This is not to discount the necessity for culinary innovation but to demand that such

innovation, rather than put profits first as is the case in most ultra-capitalist western countries, should put the health and well-being of Africans in the forefront. If that were to be the case, then new food recipes will ensure that all the ingredients utilized are wholesome and will bring nourishment rather than diseases to the consumer.

Africans must again adopt healthy lifestyles such as frequent exercise, which can be got through farming, walking, traditional sporting events and other outdoor community-based activities.

African traditional medicine’s age-old use of the extracts of Vernonia amygdalina in treating diabetes is only one of the numerous examples of the wealth of knowledge that lies in Africa’s indigenous knowledge system. As Africans begin to increasingly value their own knowledge, there will be exponential innovations from the continent which will solve numerous challenges the world faces today across sectors.

This article was extracted from Africa’s Health and Education magazine that’s currently on the stands.