

# JAPANESE ANTS (TENEBRIO MOLITOR) STABILIZE BLOOD SUGAR LEVELS FOR DIABETICS: THE CURRENT ISSUE OF HERBAL MEDICINE IN INDONESIA

*by Asirotul Ma'rifah*

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**JAPANESE ANTS (TENEBRIO MOLITOR) STABILIZE BLOOD SUGAR LEVELS FOR DIABETICS: THE CURRENT ISSUE OF HERBAL MEDICINE IN INDONESIA**

**Asirotul Ma'rifah**

BINA SEHAT PPNI Institute of Health Sciences Mojokerto Indonesia

Email correspondence: [asirotul.marifah@gmail.com](mailto:asirotul.marifah@gmail.com)

ABSTRACT	Keywords
<p><i>There are still many of our people who have never heard or even seen the shape of the Japanese ants, so sometimes people consume Japanese ants with different doses between people with each other and even some who consume Japanese ants are not appropriate doses because they want to get well soon. The purpose of research to know the relationship between consumption patterns of Japanese ants and blood sugar levels of people with diabetes mellitus. The design of this study is correlational analytic with crosssectional approach. Variables of this research there are two that is the pattern of consumption of Japanese ants as an independent variable and blood sugar levels as the dependent variable. The population of this study was all patients with diabetes Mellitus who had suffered &gt; 5 years who consumed Japanese ants in Grinting Village Karangjeruk Village Jatirejo Subdistrict Mojokerto regency as many as 10 respondents. in the sampling of researchers using total sampling technique. Data collection with an observation sheet of Japanese ant consumption and blood sugar level. The result of the research showed that most of the respondents consume Japanese ants regularly as much as 6 respondents (60%) and most respondents have blood sugar level in the normal category that is between 100-125 mg/dl as many as 6 respondents (60%). Consumption Japanese ants can routinely lower blood sugar levels of people with diabetes mellitus because ants contain enzymes that can keep blood sugar levels diabetics.</i></p>	<p><b>Japanese Ants, Blood Sugar Levels, Diabetes mellitus</b></p>

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## INTRODUCTION

People with diabetes mellitus today continue to increase along with the increasing level of prosperity and lifestyle changes. Treatment of diabetes mellitus using conventional medicine, the price is relatively high and can cause unwanted side effects. Therefore, it is necessary to look for active drugs, relatively small side effects with low rates (Pasaribu, Sitorus, & Bahri, 2012).

Diabetes or diabetes mellitus disease can be fatal if not treated and resolved quickly and precisely. Not a few people with diabetes mellitus who have complications due to late and wrong in overcoming them, so we must more be overwhelmed by the problem of this disease soon. But because there is discovery, the use of Japanese ants as a drug diabetes mellitus. Many people are now using the Japanese Ants as an alternative drug diabetes mellitus. Although some people already know the benefits of Japanese ants for the treatment of some types of diseases, still many do not know about what are the advantages and benefits of Japanese ants for treatment and also even much wrong in consuming the Japanese ants. Can we understand because Indonesia is still not so famous about this animal. The species of one of these ants or commonly called "Tenebrio Molitor" is an insect supposedly derived from the land of cherry. No wonder if there are still many people we have never heard or even see their form, so sometimes people consume Japanese ants with different doses between people with each other and yet there are also consuming Japanese ants are not appropriate dose because want to get well soon.

Data from Global status report on Non-Communicable Diseases (NCD) WorldHealth Organization (WHO) DM is ranked 6th as the cause of death. International Diabetes Federation (IDF) calculates the incidence of DM in the world in 2012 is 371 million people, in 2013 increased to 382 million people and estimates by 2035 the DM will increase to 592 million people (Kemenkes RI, 2013). In Indonesia the incidence of DM including the 7th largest sequence in the world that is 7.6

million people while the incidence rate of diabetic ulcer patients is 15% of patients with DM. Even mortality and amputation rates are still high at 32.5% and 23.5% (Prastica, 2013). Meanwhile, according to the Board of Persatuan Diabetes Indonesia (Persadia) Subagijo Adi in East Java the number of patients with diabetes mellitus 6% or 2,248,605 people from the total population of East Java as many as 37.476.757 people (Population Census, 2013). Based on data from Mojokerto District Health Office, the total number of diabetics in 2013 is 2,214 people from 1,123,239 residents of Mojokerto regency.

According to Zhao-Fen, Yue-Xin, Dong-Chi, & Yin-Shan (Bioengineering College of Fujian Normal University, Fuzhou 350007, China) states that Hongkong caterpillars contain an enzyme called HME or Hepatic Microsomal Enzyme System that functions like anticoagulant or anti-clotting and according to XU Shi-Cai XI Zheng-jun SHEN Xue-Jian AI Jia-le states that Hongkong worms are rich in proteins and various amino acids in which these amino acids have a function to stabilize blood sugar levels (Pasaribu et al., 2012; Zhao-Fen, Yue-Xin, Dong-Chi, & Yin-Shan, 1998).

The results of the preliminary study conducted on 02-04 December 2017 in Hamlet Grinting Village Karangjeruk District Jatirejo Subdistrict Mojokerto with interview technique to 7 patients with diabetes mellitus obtained data 5 people (71%) consume Japanese medicines are not by the doses that they drink to consume medical drugs obtained from prescription. While 2 people (29%) already know the Japanese ants can lower blood sugar levels for patients with DM and they also have to consume ants follow the recommended dosage rules.

Various types of treatment appear to accompany every kind of disease, ranging from drugs made with chemicals, herbal materials or even animal or animal that has unique properties to treat specific conditions. The Japanese ants are the type of ant many talks about because of its

usefulness convinced and proven to cure diabetes, cholesterol, hypertension, heart, and vitality and increase human stamina is also one of the most challenging types of veterinary drugs. Diabetes caused by high levels of sugar in the body should be cured by eating Japanese ant diabetes medication. However, it should be adapted to the way the Japanese ants correctly. Because, if not so, perhaps not the healing that can be, but the disease even worse (Andi, 2016). In consuming Japanese ants must be in sufficient quantities, in Japanese ants contain content that can bind the excessive sugar content and then destroyed by the digestive system. Japanese ants contain nutrients, and substances containing drugs including Proteins, Amino Acids, Lactic Acids, Hyaluronic Acids (hyaluronic acid), Hmes enzymes. Deficiencies or deficiencies of amino acids can cause imbalances of enzymes and hormones. Japanese ants contain amino acids that can trigger insulin release that can help balance blood sugar levels (Setiawan, 2015). Therefore health workers can use Japanese ants as an alternative non-pharmacological treatment for diabetes mellitus. Besides, that patients should also look for an effective and efficient treatment alternative for Mellitus diabetes in addition to Japanese ants as diabetes mellitus continues to increase.

### MATERIALS AND METHODS

The design of this research is correlational analytic with cross-sectional approach. Variable of this research there are two that is Japanese ants consumption pattern as an independent variable and blood sugar level as the dependent variable. The population of this study was all patients with diabetes Mellitus who had suffered > 5 years who consumed Japanese ants in Grinting Village Karangjeruk Village Jatirejo Subdistrict Mojokerto regency as many as 10 respondents. in the sampling of researchers using total sampling technique. Data collection with observation sheet of Japanese ant consumption and blood sugar level.

How to assess the consumption pattern of Japanese ants with the following criteria:

1. Routine if the consumption of Japanese ants by the number and frequency suggested
2. Not routine: if the use of Japanese ants does not match the amount and frequency suggested

How to assess blood sugar levels by making blood sugar observation discs using gluco-test with the existing classification:

1. Hyperglycemia if blood sugar levels > 125 mg/dl
2. Normal if blood sugar levels 100-125 mg/dl
3. Hypoglycemia if blood sugar levels <100 mg/dl.

### RESULTS

1. Characteristics of respondents based on the consumption of Japanese ants

Table 1 Distribution of frequency of respondents based on the consumption of Japanese ants In Karangjeruk Village Jatirejo Sub-district Mojokerto Regency May 2018

No	Consumption of Japanese Ants	F	%
1	Routine	6	60%
2	Infrequently	4	40%
Total		10	100

Source: Primary Data, May 2018

Based on table 1 above-obtained data that most respondents consume Japanese ants regularly as much as 6 respondents (60%).

2. Characteristics of respondents based on Blood Sugar Levels

Table 2 Distribution of frequency of respondents by blood sugar level In Karangjeruk Village, Jatirejo Sub-district, Mojokerto Regency, May 2018

No	Blood Sugar Levels	F	%
1	Hyperglycemia	4	40%
2	Normal	6	60%
3	Hypoglycemia	0	10%
Total		10	100%

Source: Primary Data, May 2018

Based on table 2 above-obtained data that most respondents have blood sugar levels in the normal category is between 100-125 mg/dl of 6 respondents (60%)

### Crosstabulation "Consumption Of Japanese Ants And Sugar Levels"

		Blood Sugar Levels					
		Hyp ergl yce mia	F ( %)	N or m al	F ogly cemi a	Hyp ( %)	T o t a l
Con sum ptio n of	Ro utin e	1	0	5	0	0	6
Japa nese Ant s	Infr equ entl y	3	0	0	1	0	4
	Tot al	4	0	5	0	1	10

Source: Primary Data, May 2018

## DISCUSSION

### 1. Consumption of Japanese ants

The results obtained data that most respondents consume Japanese ants regularly as much as 6 respondents (60%). Drinking Japanese Ants Directly using water is the most common way because the effects that arise from consuming Japanese Ants in this way will be instantly felt on the body, i.e., within half an hour after consuming the Japanese Ants Body will handle warm. The secrets and benefits contained in the Japanese Ants are present when Japanese Ants are immersed in water, Japanese ants instinctively release the body's defense enzymes when there are those who capture their lives. Japanese Ants Enzyme is what if we consume the benefits and benefits on the Body of People who consume the Japanese Ants (Setiawan, 2015).

These results indicate that many are still confused and often ask about how many doses of drinking rules. Therefore you need to note that you do not have the advantages in consuming If excessive ants consumption

will be harmful. To be able to get the benefits and results as we want, please read the recommended dosage rule below so you will not be confused anymore. Many formations are circulating in the community that eating ants, and Japanese lice are beneficial to lower blood sugar levels for people with diabetes. Some online sales also offer a Japanese bug that is said to be helpful to health.

### 2. Blood Sugar Levels

Based on the table obtained data in table 2 shows that most respondents have blood sugar levels in the normal category of 100-125 mg/dl of 6 respondents (60%).

Diabetes Mellitus is a genetically and clinically heterogeneous metabolic disorder with manifestations of loss of carbohydrate tolerance (Gitarja, 2008).

The course of the disease experienced by the respondents affects the quality of their lives which with the illness that has been sustainable from year to year cause the respondents feel restless and desperate in doing the treatment of the disease especially in the respondents who experienced complications can have an impact that negatively affects the quality of their lives. Also, because of low knowledge about the journey of diabetes mellitus causes respondents to lack understanding of the necessary forms of care so that they feel desperate what to do and affect the quality of life diabetes mellitus itself.

## CONCLUSION

1. The pattern of Japanese ant consumption of diabetes mellitus mostly consumes Japanese ants regularly as much as 6 respondents (60%).
2. Blood sugar level of diabetes mellitus patient mostly have blood sugar level in the normal category that is between 100-125 mg/dl counted 6 respondent (60%)

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