

**THE EFFECTIVENESS OF PHYSICAL EXERCISE (LOW IMPACT  
AEROBIC AND JOGGING) ON DECREASING 2 HOURS  
POSTPRANDIAL (PP) BLOOD GLUCOSE LEVEL IN  
TYPE II DIABETES MELLITUS PATIENTS  
BABAKAN SARI COMMUNITY  
HEALTH CENTER BANDUNG  
2018**

Nurhayati, Usan Daryaman, Nurlaeci

**Abstrak**

**Background:** Diabetes mellitus (DM) is a chronic disease that occurs because the pancreas cannot produce enough insulin or because the body cannot effectively use the insulin. Uncontrolled blood glucose levels in a long time can cause serious damage in many body systems, especially nerves and blood vessels (Parkeni, 2012). DM is a hyperglycemia disease characterized by absolute absence of insulin or a relative decrease in cell insensitivity to insulin (Corwin, 2009). According to the American Diabetes Association (ADA) 2016, diabetes mellitus (DM) is a progressive chronic metabolic disease characterized by hyperglycemia (high blood sugar levels), which is caused by a lack of insulin secretion, insulin activity or both (American Diabetes Association, 2016). This happens because the body cannot respond to insulin work resulting in ineffective insulin being produced, so the body's cells cannot take glucose and use it as energy (International Diabetes Federation, 2016). Typical symptoms that often arise in people with DM are polydipsia (excessive thirst), polyuria (excessive urination), polyphagia (excessive hunger), blurred vision and drastic weight loss (Lanywati, 2011). According to the World Health Organization (WHO), 2015 as many as 80% of DM patients in the world come from developing countries, one of which is Indonesia. The increasing number of DM patients that occur consistently shows that DM disease is a health problem that needs special attention in health services in the community. The number of people with DM in the World as many as 387 million in 2014 increased to 415 million in 2015 and is expected to increase to 642 million by the year 2040. The number of deaths that occurred in 2015 was as many as 5.0 million (International Diabetes Federation, 2015). According to International Diabetes Mellitus, China has first rank with the number of DM patients 19.4 million, in the second there was India with the number of DM patients with 16.0 million people, and then the United States with the number of DM patients with 13.9 million people, Russia with the number DM patients, 9 million, Japan with 6.3 million people with DM, Brazil with DM with 4.9 million and Indonesia ranked 7th in the world at 4.5 million, (IDF, 2015). According to the Basic Health Research Report / Riset Kesehatan Dasar (Riskesdas) the prevalence of DM patients in 2013 (2.1%) experienced an increase compared to 2007 (1.1%). The incidence of DM in West Java is one of the provinces in Indonesia which has a high number of diabetics. Diabetes mellitus patients who did outpatient in several hospitals in West Java in 2014 it is about 40,853 people, while those who were admitted to inpatient were 7,658 people (West Java Health Office/ Dinas Kesehatan Jawa Barat, 2014). According to the Bandung City Health Office (Dinas Kesehatan Kota Bandung) that were 10 percent of the population suffering from Diabetes



Melitus. Diabetes mellitus also ranks 5th as the most common disease in Bandung, the tendency of the incidence of diabetes mellitus in Bandung in 2015 is relatively increase if we compared to 2014. The incidence of diabetes mellitus 2015 reached 31,711 residents, while in 2014 it reached 24,301 residents (City Health Office of Bandung, 2015). Therapy Management of diabetes mellitus can be done by pharmacological therapy and non-pharmacological therapy. Pharmacological therapy is the management of diabetes mellitus

