

# Ablution (Wudu) health benefits (HBs) through comparison nasal–cavity (NC) bacterial–content (BC) with gold–standard (GS) at high–altitude (HA) area, Taif, KSA

## Abstract

This paper were for witness of “Ablution (Wudu) health benefits (HBs) through comparison nasal-cavity (NC) bacterial-content (BC) with gold-standard (GS) at high-altitude (HA) area, Taif, KSA”, the mean of total results NC-BC produced 66.2% quantity, after GS inhalation the NC-BC decreased to 21.4%, while after ablution decreased to 29.4%. The bacterial Spp were isolated (*Staph. aureus*, CNS, *Staph. epidermidis*, Non haemolytic Strept. and *E. coli*). The most important bacteria are isolated from NC were in descending gradient as follow: (*Staph. aureus*, *Staph. epidermidis*, *E. coli*, CNS and Non haemolytic Strept.) were in (32, 30, 4, 3 and 3%) respectively. After use of the GS, the reminded bacteria were (*Staph. aureus* and *Staph. epidermidis*) were in (5 and 10%) respectively. While after ablution the results were recorded (*Staph. aureus* and *Staph. epidermidis*) were in (11 and 16%). The concluded an importance of ablution and use of each step well to maintain individuals hygiene, five times ablution is best cleaning the NC well during the day. Where the results confirm the oozing of a healthy result and protection against bacterial infectious diseases and their bacterial causes. This emphasized the need for good ablution for every step and continuous regular five times dally, this is from Islam rules for ablution and prayer, which is the pillar of Islam for the person. That recommends regular ablution five times and works every step accurately as requested Islam and regular five times a day to gain the benefits of ablutions, especially in NC.

**Keywords:** *Staph. aureus*, *Staph. epidermidis*, non haemolytic strept, *E. coli*

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## Introduction

Nasal inhalation is a personal hygiene practice, NC is washed to flush out mucus and debris, its generally well-tolerated and reported to be beneficial.<sup>1</sup> Nasal inhalation is a wider sense can use of saline nasal as GS for neutralize NC mucous membranes, promotes good sinus and nasal health, also decreases symptoms, and decreases medication use in patients with frequent sinusitis.<sup>2</sup> Hygiene of nose an important part of ablution.<sup>3</sup> This is done at least a few times on a daily basis, Allah and Prophet emphasized.<sup>4</sup> The aim of this research was to fix ablution BHs by inhaling with water and comparing the result to GS. This was to confirm the person ablution in health and cleanliness. In addition the regular ablution five times dally to pray to prove the importance of individual ablutions and good use of each step. It was necessary to emphasize the provisions of Islam, including person benefit for religious and health.

## Materials and methods

**Study area:** The practical part were done in Taif area, an idea was presented to volunteer muslin peoples, 15 persons aged were (25-50) years, they were approved to perform an experiment. They were been good in ablution and pray 5 times regularly dally, also they were healthy did not sick or did not take any medications, as well approves were gained.<sup>5</sup>

**Experiment:** Each 3 persons were involved into a group, they were had similar qualities and habits, that was resulted in 5 groups were named (G1, 2, 3, 4 and 5). The experiment was began in ordinary

day, NC samples were collected from each person without any ablution or any irrigation uses. NC irrigation was used Sterile Saline Solution (SSS),<sup>6</sup> that was considered as (GS) and then NC samples were collected, the followed day NC samples were collected after normal ablution. Data label was added for each NC sample, then were transferred to Microbiology Lab. within (1-2) hours.<sup>7</sup>

**Bacterial methods:** BC was measured by turbidity degree by Spectro-photo-meter.<sup>8</sup> Bacterial isolation was done by ideal methods<sup>9</sup> and identification were done by Micro-Scan.<sup>10</sup>

**Data analysis:** The results were gathered and were done arithmetic mean for each group, the Simple Excel Method was used for data to extract results in tables and graphs.<sup>11</sup>

## Results and discussion

Table 1 & Graph 1 showed incidence and mean of NC-BC, through the mean of total results NC-BC was found for samples prior to ablution or use of any inhalation material that produced (66.2%) quantity. After GS inhalation the NC-BC decreased to 21.4%, while after ablution decreased to 29.4%. After GS inhalation NC-BC lost about 2/3 of quantity, while after one ablution using water only without any additions, NC-BC lost more than 1/2 of quantity. When comparing one ablution with GS use emphasized the importance of ablution, especially for inhalation GS solution which might not available for every persons, or they did not know how to deal with it. NC-BC reduced with each ablution to 1/2, that might reached the minimum BC within 5 ablution according to the Islamic prayers. That

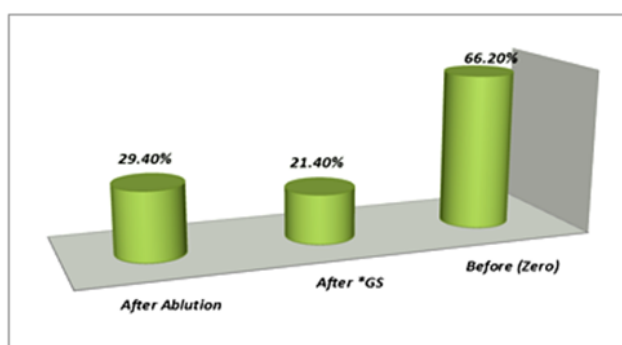
would had a clarity of the regular ablution reduced (rot, odorous and bacterial infection). This indicated ablution HBs in manner of regular

five ablution for personal general health, hygiene to reduce the BC and bacterial infections.<sup>1-4</sup>

**Table 1** Incidence and mean of \*NC-BC

Items	Bacterial loads		
Group *No	Before (Zero)	After *GS	After ablution
*G1	69%	22%	31%
*G2	63%	20%	28%
*G3	67%	21%	30%
*G4	70%	25%	33%
*G5	62%	19%	25%
Mean	66.20%	21.40%	29.40%

\*NC-BL, nasal cavity–bacterial content; \*No, number; \*GS, gold standard; \*G, group



**Graph 1** Incidence and mean of \*NC-BC.

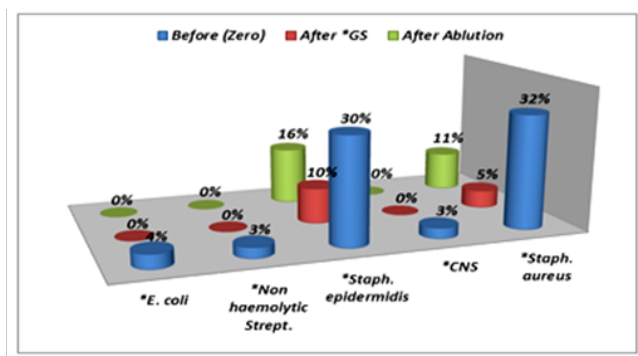
Table 2 & Graph 2 showed incidence and mean of bacterial Spp., from the final mean results the bacterial Spp were included (*Staph.*

*aureus*, CNS, *Staph. epidermidis*, Non haemolytic Strept. and *E. coli*). The most important bacteria are isolated from NC were in descending gradient as follow: (*Staph. aureus*, *Staph. epidermidis*, *E. coli*, CNS and Non haemolytic Strept.) were in (32, 30, 4, 3 and 3%) respectively. This bacteria could cause infectious bacterial diseases. After the use of the GS, the reminded bacteria were (*Staph. aureus* and *Staph. epidermidis*) were in (5 and 10%) respectively. While after ablution the results were recorded two Spp reminded were (*Staph. aureus* and *Staph. epidermidis*) were in (11 and 16%) and highly pathogenic. Either after ablution were reminded same Spp but higher than the GS. All had foxed on the reminded bacteria were had the most important to cause bacterial infection. Through the result, the importance of ablution was found regularly five times according to Islamic rules where it had a characteristic in decrease NC-BC, this helped to reduce bacterial infections and increase personal hygiene and preventive health measures, this called “ablution HBs”.<sup>1-4</sup>

**Table 2** Incidence and mean of bacterial \*Spp

Items	Bacterial loads		
Bacterial *Spp	Before (Zero)	After	After ablution
		*GS	
* <i>Staph. aureus</i>	32%	5%	11%
*CNS	3%	0%	0%
* <i>Staph. epidermidis</i>	30%	10%	16%
*Non haemolytic Strept	3%	0%	0%
* <i>E. coli</i>	4%	0%	0%

\*Spp, species; \*GS, gold Standard; \*Stap, *Staphylococcus*; \*CNS, coagulase negative staphylococcus; \*NHS, non haemolytic streptococcus; \**E. coli*, *Escherichia coli*



**Graph 2** Incidence and mean of bacterial \*Spp.

## Conclusion

Through the results produced from the research to compare GS, that found the importance of ablution and the use of each step well to maintain individuals hygiene. It was also found that five times ablution is best cleaning the NC well during the day. Where the results confirm the oozing of a healthy result and protection against bacterial infectious diseases and their bacterial causes. This emphasized the need for good ablution for every step and continuous regular five times dally, this is from Islam rules for ablution and prayer, which is the pillar of Islam for the person. Those recommend regular ablution five times and work every step accurately as requested Islam and regular five times a day to gain the benefits of ablutions, especially in NC.

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## Conflicts of interest

The author declares there are no conflicts of interest.

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