 

**Instructions for the Lymphoedema BMI and Limb Volume Calculator App**

 **Welcome to the 2019 LNNI BMI and Limb Volume calculator App**

The App provides two functions:

* BMI calculations
* Limb Volume calculations

All outcomes can be viewed on the device screen, saved as a screen shot or emailed to a specific email address. The default address is info@lnni.org.

No identifiable data is required to use this function or to send the outcome email. GDPR is therefore not affected.

The first screen is the reset option for all data added to the App; hence by returning to the home screen, the App will clear and be ready for a new calculation.

During the use of the App, a grey numeric software keypad will appear. At times, it may be necessary to remove this from the screen to enter values into the on screen text fields. To do this, press the “backstack” button at the bottom left of the android phone.

To use the App:

* Click on the App to open the functions and press “start” to begin
* Select which calculation you wish to use i.e. “Limb Vol” or “BMI”
* If BMI:
* select the standard you wish to enter the data in i.e. metric or imperial using the down arrow (entre height and weight values using the same standard)
* click on height or weight and enter the value using the grey keypad

 Enter the height in centimetres or Feet and Inches

 Or

 Enter the weight in Kilograms or pounds (lbs)

* Click “Done” twice and the BMI value will appear
* Click “Done” again and the data will be temporarily saved to provide detail for final outcome summary and data to be emailed.

Once complete, “backstack” again to the menu choice screen and chose “Limb Vol”

* If Limb Volume:
* MTP/MCP circumference measurement: click on R and L to enter the circumference value using centimetres
* Mid Foot circumference: clink on R and L to enter the mid foot circumference using centimetres
* Continue to scroll up the screen and, for the mid foot measurement, add the distance from nailbed of middle toe or web space (in 0 degrees ankle dorsi flexion): click on line and enter data in centimetres. Leave blank if not appropriate.
* Add the distance measurement from the sole of the foot to the first leg circumference (with the ankle in 0 degrees dorsi flexion) or the distance from the nail bed of middle finger to the first arm circumference (with the wrist in 0 degrees flexion)
* Click “Enter data” to save this data, and the message “data recorded” will appear
* To begin to record limb circumferential measurement, click “Proximal Distal” button to open the next page, and then select Left or Right limb
* Enter data for one leg and then the other using distal and proximal measurements. It does not matter which side is done first. You can move down the table by clicking on next or touching the screen at the lower level. You must add at least 2 measurements for each leg.

When you have finished entering the data for ***each leg,*** click “Get Data” to save the data for that leg. You may have to use the “backstack” button to see the “Get data” button.

Repeat for the second leg.

10 circumference measurements can be added for distal, and 10 for proximal, per leg.

* Click “Collate results” to display all of the circumferences that you have recorded.

Scroll up the screen to see all of the circumferential results.

* Click “summary” and the page will display the following (as completed for either arm or leg requirements) with date and time recorded:
* BMI value
* MTP/MCP circumference
* Mid foot circumference
* Distance from nailbed or web space to mid foot circumference measurement
* Distance from sole to first leg measurement
* Distance from nail bed to Arm first measurement
* Distal Vol R and L
* Proximal Vol R and L
* Total Vol R and L
* Volume Differences (in mls and percentages) – distal, proximal and total

 (Scroll up to see all of the values)

* Click on “Send Email” and the data will be exported to a spreadsheet
* Insert your email address or the address the summary is to be forwarded to
* This will default to info@lnni.org if no new email address is added

Click on “Backstack” to clear the App and allow new data to be added.