

### Fluid measurements in Fluid Ounces

1 teaspoon = 59 mls

3 teaspoons = 1 tablespoon = 15mls

2 tablespoons = 1 fluid ounce

16 tablespoons =

1 cup = 8

fluid ounces = 236 mls

1 pint = 2 cups = 16

fluid ounces = 473 mls

1 quart = 2 pints = 4 cups = 32

fluid ounces = 946 mls

1 gallon = 4 quarts = 8 pints = 16 cups = 128

fluid ounces = 3785 mls

### Weight in Ounces

1kg = 2.2 lbs = 35.2 ounces weight

1lb = 0.45kg = 16 ounces weight

### Length

1 mile = 5280 feet = 1.6 km

1 km = 3200 feet ( 1 ft = 0.3 meters )

### Percent Concentration Solution

100% solution = 1g in 1ml

1% solution = 1g in 100mls = 10mg in 1ml = 1:100

1:1000 solution = 1g in 1000mls = 1mg in 1ml = 0.1% solution

### Strength of Solution

= mass in grams / 100mls solution

'Full strength' sodium hypochlorite = 0.5% = 500mg/100mls = 1:200

½ strength Dakens = 250mg / 100mls, 1/4 strength Dakens = 125mg / 100mls

Chlorox is 5.25% hypochlorite = 5250mg / 100mls

¼ strength: 42 mls water + 1ml chlorox = 1 tablespoon + 2 teaspoons of Chlorox (24mls) + 32 ounces water (946mls)

### Maximum Recommended Local Anesthetic Dosage Solution for Lidocaine, Marcaine & Epinephrine

#### Lidocaine

Tumescent: 35 mg/kg ( 80kg male = 2800mg = 2.8g )

1% = 1g in 100mls, ie 80kg patient = 240mls, if 0.5% = 480mls, 0.25 % = 960mls

Subcutaneous 1% Lidocaine with 1:200,000 epi: 7mg/kg ( 80kg male = 560mg )

If 1% = 1g in 100mls, ie 80 kg patient = 56mls, if 0.5 % 112mls, 0.4% = 140mls, 0.25% = 224mls

#### Marcaine

0.5% with or without epi: 5mg/kg ( 80kg male = 400mg )

0.5%=1/2g in 100mls, ie 80 kg patient= 80mls, 0.25%=160mls, 0.125 = 360mls, 0.07%= 550mls, 0.03=1.3L

#### Epinephrine

1:1000 epinephrine = 1g/liter = 1mg/1ml

1:100,000 epinephrine = 1mg / 100 mls

7micrograms/kg ( 80kg male = 560 micrograms) = 1/2mg = ½ ml of 1:1000 epi

= 50mls of 1:100,000 ( 1ml 1:1000 in 100mls )

= 90mls of 1:175,000 ( 1ml 1:1000 in 175 mls )

= 150mls of 1:300,000 ( 1ml 1:1000 in 300 mls )

= 500mls of 1: Million ( 1ml 1:1000 in 1L )

### Office Based Tumescent and subcutaneous Injection

Total (mls)	RL	1% Lidocaine	Final%	½ %Marcaine	Final%	1:1000 Epinephrine
175 mls	100	50mls	0.4	25mls	0.07	0.5 mls ( 1: 350,000 )
400 mls	250	100mls	0.26	25mls	0.03	1.0 mls ( 1:400,000 )
650 mls	500	100mls	0.15	50mls	0.04	1.5 mls ( 1:433,000 )

*Use either 250 or 500ml RL bags and discard the amount to make as directed above*