1cc to ml syringe

Most herpers can hardly be called squeamish. But when it becomes necessary to give medicine by injection, many herpers discover that they must overcome their squeamishness and learn how to stick a needle in live (and often beating) flesh. Most people think they would prefer to pry open their mouth on a reluctant monitor rather than stick it with a needle, but there are times when injections are the best - or only - option. Just be sure to learn how to give an injection as one of the more important parts of your growth as an experienced herptile keeper. This article will not teach you how to make sticking, but to show you how to properly pull up the right amount of medication. It is best to learn how to give injections by having it shown to you and for you to do so at least once under the supervision of someone experienced in giving injections. Your vet office is the best place for this training, and most would rather teach you how to do it instead of having you come in to get them to do it. Reptilian and amphibian metabolism is different from bird and mammal metabolism. The wide fluctuations in temperature required by many reptiles result in a metabolism that speeds up during sunbathing hours and slows down during cooler sleep periods. Thus, most medications are administered in very small amounts and repeated at longer intervals than with endothermic animals; there are often fewer repetitions as well. The most common syringe used is a 1cc (cubic centimeter) syringe. Failure to accurately read a 1cc syringe will result in an over- or undermedicated reptile. At best, this will result in an animal that takes much longer to recover; in the worst case, you will end up with an animal died from toxic overdose. A cc is equal to one ml (milliliter); the two terms can be used interchangeably. Most syringes are labeled cc while medication strengths are labeled as milligrams per milliliter (mg/ml). Your vet will calculate just how much medication you will administer with each injection; doses are calculated based on the strength of the medicinal product and the weight of the animal and the often empirically derived reptilian dose (animal weight x dosage x strength = one dose). For example, the recommended dose of the antibiotic Amikacin is 2.5-5mg per kg body weight. Amikacin comes in 50 mg/ml vial. The veterinarian must calculate not only the actual dose, but must also scale it to the size of the animal, with larger animals receiving smaller than smaller animals. A cc syringe has markings that show tenths of a cc: .10 is one tenth of a cc; 1.0 is a cc; these two measures are often confused. Some syringes do not display the decimal point and are marked 10, 20, 30 up to 100. In this case, 10 is a tenth (.10) of a cc, and 100 is a cc. Some 1cc syringes are further split, showing markings between tenths (usually 5 short the longer tenth lines). There are times when you will be required to administer .05 cc (not to be confused with .5 cc); even without the extra markings between tenths, half ccs are easily visualized and pulled up. If you are required to pull up anything less than half a cc, such as 0.32, then you would pull up the first small line after the three tenths (.30) line. To fill a syringe, start with the plunger sent down completely. Insert the needle into the rubber cap of the vial with medication. Hold the vial upside down so that the syringe and needle point towards the ceiling. Carefully pull back the plunger to begin the flow of medication into the syringe. Draw something more than you need, then push out the excess by pushing the plunger back in; this will get rid of air bubbles that were established from the vial. If you still see air bubbles in the syringe, hold it pointed towards the ceiling and flick or tap your finger against the side of the syringe; this forces the bubbles up towards the hub of the syringe and you can push the collected air out of the needle. If you need to pull up more medicine to make the full dose, stick the needle back into the vial and draw what you need. When you are ready to administer the injection, make sure that the medication is washed up against and into the hub of the syringe. If the medication will not flow into the syringe, you need to start with some air in the syringe. Before inserting the needle into the bottle with liquid, pull back on the plunger to draw in .5 cc or so of air. After the needle has been inserted into the liquid, press down on the plunger to transfer the air into the syringe in the liquid bottle, then pull back and start filling your syringe. When pulling back the needle, hold your finger at the entry point, then gently massage the area when the needle is out. Note: Liquid medicines are measured in milliliters (ml) or cubic centimeters (cc), with syringes marked accordingly; while measured differently, they are equal to the same amount of liquid. Markings on syringes will vary depending on the total volume of the syringe. Syringes commonly used in small animals and reptile care are 1cc, 3cc, 6cc, 12cc, 35cc, and 60cc. Related Articles Drug Dosage and Pathways for Administration Online Conversion Factors: VolumeCommon Reptile Drugs and DosagesCal-Like Drug Doses (Beautiful Dragons Reptile Rescue) Pets can be sent home with liquid medications. An oral liquid medication must be given by mouth to be effective. An injectable liquid medicine must be given by injection under the skin to be useful. Some injectable medications require that the medicine is inserted into the muscle to be most effective. It is important that you understand how to read the syringes sent home so that your pet receives the right amount of medicine at each dose. There is some confusion about metric words that (ml) and cubic centimetres (cc). These are just different names for the same amount of volume. In other words, one millilitre (1 ml) is equal to one cubic centimetre (1 cc). There are different types of syringes that can be used. If your pet needs only a small amount of an oral medication, you can get a syringe that looks like this: 0.3 ml syringe This is a three tenths milliliter syringe. It can be called a 0.3 ml syringe or 0.3 cc syringe. It is also known as an insulin syringe. Although it is marked in units at the bottom of the syringe, each unit is actually one hundredth of a milliliter (0.01 ml or 0.01 cc). Each small black mark is equal to 0.01 ml. A larger black mark and a number are found every 0,05 ml (i.e., five hundredths of a ml). This syringe is provided when your pet's liquid medication is between 0.01 ml and 0.3 ml. Close to the tips of two different 0.3 ml syringes The left syringe has a red label equal to 0.03 ml. The right syringe has a label equal to 0.02 ml. 1.0 ml syringe If your pet needs a liquid amount of medication located somewhere between 0.1 ml and 1.0 ml, you can get a milliliter syringe. It can be called 1 ml syringe or a 1 cc syringe. Each small black mark corresponds to one hundredth of a millilitre (0,01 ml or 0,01 cc). A larger black mark is available every 0,05 ml (i.e., five hundredths of a ml). Numbers written on the syringe were 0.1 ml (i.e. one tenth of a ml). The red label on this syringe corresponds to 0.47 ml. 3 ml syringe If you pet needs a greater amount of an oral medication, you can get a three milliliter syringe. It can be called a 3 ml syringe or 3 cc syringe. Each small black mark is equal to 0,1 ml (i.e. one tenth of a ml). A larger black mark and a number are found every 0. 5 ml (i.e. five tenths of a ml or half a ml). The red label on this syringe corresponds to 2,0 ml. 6 ml syringe Some pets need even larger amounts of medication. This is a six milliliter syringe. It can be called a 6 ml syringe or 6 cc syringe. Each small black mark is equal to 0,2 ml (i.e. two tenths of a ml). A larger black mark and a number are found every 1.0 ml (i.e. one ml). There are even larger syringes that can be used. Please make sure you understand how to read the syringe you are getting. It is better to check with your veterinarian if you are not sure than to give the wrong amount of medication! U100 insulin syringe. U100 concentrated insulin has 100 units per ml of liquid, and should be used with U100 syringes. Cubic centimeters (cc's) and milliliters (mL's) are interchangable, so syringes marked 1ml equal to 1cc; 0.5 ml equals 1/2cc. 3/10cc equals 0.3ml. [1] Because U100 insulin syringes are designed for human use, they are available from brick-and-mortar or Internet pharmacies that sell diabetic supplies. You can also order from an Internet pharmacies such as Drs. Foster & Smith. [2] In the United States, you can expect to pay $15 to $25 for a box of 100 U100 syringes depending on the dealer and the syringe's features. Some states and countries [3] require a prescription. General information and an overview of syringes at the link. Content[view] BarrelEdit U100 syringes are available in 3 barrel sizes: 1cc (1 ml), 1/2cc (0.5 ml), and 3/10cc (0.3 ml). The size refers to the maximum volume the insulin syringe will hold; marks may differ in terms of the size of the syringe and syringe manufacturer. [4] Note that ReliOn indicates all its 3/10 cc (0.3ml) insulin syringes have half-scale/half unit markings. [5] U-100 Syringe Sizes 1cc (1 ml) Syringe Holds maximum: 100 units [6] Numbered in: 10 unit steps [7] Minimum line measures 2 units: [8] BD [9]ReliOn [10]Monoject [11](all but 31 needle gauge) Minimum line measurement 1 unit: Easy Touch [12]Precision Sure Dose[13]UltiCare [14]Monoject [15](31 gauge needle only) 1/2cc (0.5 ml) Sprayer Holds maximum: 50 units [16] Numbered in: 10 unit steps [17] Minimum line measures 1 unit: [16] Numbered in: 10 unit steps [17] Minimum line measures 1 unit: [16] Numbered in: 10 unit steps [17] Minimum line measures 1 unit: [16] Numbered in: 10 unit steps [17] Minimum line measures 1 unit: [16] Numbered in: 10 unit steps [17] Minimum line measures 1 unit: [16] Numbered in: 10 unit steps [17] Minimum line actions 1 unit : [16] Numbered in: 10 unit steps [17] Minimum line measures 1 unit: [16] Numbered in: 10 unit steps [17] Minimum line measures 1 unit: [16] Numbered 18] BD [19]Precision Dose[20]Ulti-Care [2 1][22] Easy Touch [23]ReliOn[24]Monoject [25] 3/10cc (0.3 ml) Syringe Holds maximum: 30 units [26] Numbered in: 5 unit steps [0.3 ml) Syringe Holds maximum: 30 units [26] Numbered in: 5 unit steps [0.3 ml) Syringe Holds maximum: 30 units [26] Numbered in: 5 unit steps [0.10 27] Minimum line measures 1 unit: [28] BD Micro Fine [29]BD Ultra Fine [30][31](standard only Length)Monoject [32] Easy Touch [33]UltiCare [34] Half-unit scale 3/10cc (0.3 ml) Syringe [35] Holds maximum : 30 units [36] Numbered in: 5 unit steps [37] Minimum line measures 1/2 unit : BD Ultra Fine II (short) [38][39]ReliOn [40][41] If for any reason you need to change the size of the syringe you normally use, extra caution when drawing insulin will be needed. Those who normally use 3/10 cc syringes, with single or half-unit marking, may run the risk of giving too much insulin by following the mark on 1cc syringes. Some brands of 1cc syringes have their smallest non-numbered marks on 2 units, [42] others have theirs on 1 unit. [43] The 3/10cc syringe has 1 device marks. Some manufacturers also have 3/10cc syringes with 1/2 unit marks called half-unit scale or half-scale markings, as seen in the table above [44] and in the picture below. Visual guide barrel markings Reit This is a 1 cc, 1 ml U100 insulin syringe with markings indicating each TWO units. This is a 1/2 cc, 0.5 ml U100 insulin syringe with markings indicating each unit. These are 3/10 cc, 0.3 ml Of U100 insulin syringes. On the left are half-scale, or half-unit markings. On the right are whole units with a mark for each unit of insulin. NeedleEdit U100 syringes come with a standard long (12.7mm or 1/2) or short (8mm or 5/16) needle. Most syringes with 1/2 unit markings come in the short length, although some manufacturers put long needles on barrels with 1/2 unit markings. Some caregivers prefer the long needle so that make sure they make it through the coat to the skin. Some feline caregivers prefer the short needle because it minimizes chance sow they will push through the tent and spill insulin on the pet's fur on the other side. However, some caregivers report a difference in insulin absorption with different cross-country needles. BD Diabetes [45] explains that you should consult your healthcare professional before using a short needle, and carefully monitor blood glucose when switching to a shorter needle. Some people have found their blood sugar not well controlled when switching to the shorter needles; this has also been the case with some dogs. Switching back to a longer needle solved the problem. You should consider experimenting with the different length needles. AAHA recommends using standard (12.7 mm or 1/2) long jumpers. [46] GaugeEdit U100 syringes are available in different thicknesses of needle: the gauge (rhymes with a cage). The higher the meter number, the thinner the needle. [47] Common gauges range from 28 to 31. Caregivers report that thinner needles make the shot more comfortable for the pet. The 31 meter syringes are available only with short needles. A 2000 study of children with diabetes at a walking age from 8-21 years compared bleeding, pain/ discomfort and insulin leakage using 27-30 gauge needles. Overall, doctors found no significant differences between any of the needle meters used. [48] AAHA recommends using 29 gauge needles. [49] ConversionProcessed Use of U-40 insulin in U-100 syringes. Top syringe is a 3/10 cc (max 30 units) syringe with half-scale (half unit) markings. Bottom syringe is a 3/10 cc (max 30 units) syringe without half-scale (half unit) markings. Although not recommended by veterinarians, some health care providers use a U100 syringe with a U40 insulin. It requires converting the U40 concentration to a U100 force. [50] See conversion table. If you decide to use the U100 syringes for U40 insulin, a quick way to calculate the right amount of units is to multiply the number of U40 units given by 2.5. The advantage of doing this conversion is the possibility of greater precision for low-dose animals - exact dose steps of 0.2 units are possible with half-unit labeled U100 syringes (if your insulin is U40). On the other hand, if you find the conversion confusing, it's best not to try – it can be extremely dangerous to get this math wrong. Conversion Chart for Using U-40 Insulin With U-100 Syringes [51] To get this many units of U-40 insulin 3.1 1.50 3.8 1.75 4.4 2.00 5.0 2.25 5.6 2.50 6.3 2.75 6.9 3.00 7.5 3.25 8.1 3.50 8.8 3.75 9.4 4.00 10.0 4.25 10.6 4.50 11.3 4.75 11.9 5.00 12.5 5.25 13.1 5.50 13.8 5.75 14.4 6.00 15.0 6.2 5 15.6 6.50 16.3 6.75 16.9 7.00 17.5 7.25 18.1 7.50 18.8 7.75 19.4 8.00 20.0 8.25 20.6 8.50 8.75 21.9 9.00 22.5 9.25 23.1 9.50 23.8 9.75 24.4 10.00 25.0 10.25 25.6 10.50 2 6.75 3 10.75 26.9 11.00 27.5 11.25 28.1 11.50 28.8 11.75 29.4 12.0 30.0 ReferencesEdit Milliliter to Cubic Centimeter Converter. Calculateme.com. ↑ Drs. Foster & Smith website. ↑ Syringes--Prescription Coated or not?. Childrenwithdiabetes.com. ↑ Insulin therapy-Insulin syringes. RxEd.org. ↑ ReliOn-all 3/10 Syringes with half-unit markings. ↑ When-up of BD 1cc Syringes-UltraFine-30 meters-1/2, UltraFine II-5/16 Short-31 meters & MikroFine-28 meters-1/2. ↑ When-up of BD 1cc Syringes-UltraFine-30 meters-1/2, UltraFine II-5/16 Short-31 meters & MikroFine-28 meters-1/2. ↑ Diabetes Mellitus. Washington State University. ↑ When-up of BD 1cc Syringes-UltraFine-30 meters-1/2, UltraFine II-5/16 Short-31 meters & MikroFine-28 meters-1/2. ↑ ReliOn insulin syringe markings. ↑ Sugar illness health syringe Lists. ↑ Easy touch Syringe demonstration-their syringes measure all in 1 unit step. ↑ Sugar illness health syringe Lists. ↑ Sugar illness health syringe Lists. ↑ Sugar illness health syringe Lists. ↑ When-up of BD 1/2 cc syringes--UltraFine-30 meters-1/2, UltraFine II card-31 meters-5/16 & MikroFine-28 meters-1/2. ↑ When-up of BD 1/2 cc syringes--UltraFine-30 meters-1/2, UltraFine II card-31 meters-5/16 & MikroFine-28 meters-1/2. ↑ Diabetes Mellitus. Washington State University. ↑ When-up of BD 1/2 cc syringes--UltraFine-30 meters-1/2, UltraFine II card-31 meters-5/16 & MikroFine-28 meters-1/2. ↑ Sugar illness health syringe Lists. ↑ Ulti-Care U100-syringe-product information. ↑ Sugar illness health syringe Lists. ↑ Easy touch Syringes demonstration-all syringes with 1 unit step marking. ↑ ReliOn insulin syringe markings. ↑ Sugar illness health syringe Lists. ↑ Close-up of BD 3/10 Syringes-UltraFine-30 meters-1/2, UltraFine II Short-31 meters-5/16, UltraFine card-half unit marks-31 meters-5/16 & MicroFine-28 meters-1/2. ↑ Close-up of BD 3/10 Syringes-UltraFine-30 meters-1/2, UltraFine II Short-31 meters-5/16, UltraFine card-half unit marks-31 meters-5/16 & MicroFine-28 meters-1/2. ↑ Diabetes Mellitus. Washington State University. ↑ Sugar illness health syringe Lists. ↑ Close-up of BD 3/10 Syringes-

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