

Neurological  
Foundation  
A pathway to hope

**CR****CHET**  
a neuron

# Introduction



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This booklet will take you through the process, from start to finish, of how to crochet your very own neuron! Neurons are cells of the brain and nervous system that are responsible for receiving sensory input from the world around you, for sending motor commands to your muscles, and for transforming and relaying electrical signals at every step in between! How many do we have? Roughly 100 billion!<sup>1</sup> Let's just start with creating one...

Crocheting itself has been proven to reduce blood levels of the stress hormone, cortisol. New neuropathways can also be created by learning such skill and partaking in such high-level hand movement. As these neuropathways strengthen, we are effectively changing our minds, and creating a quieter and more relaxed state of being.<sup>2</sup>

Happy crocheting!

<sup>1</sup> [qbi.uq.edu.au/brain/brain-anatomy/what-neuron](http://qbi.uq.edu.au/brain/brain-anatomy/what-neuron)

<sup>2</sup> [anxietyresourcecenter.org/2017/10/crochet-helps-brain/](http://anxietyresourcecenter.org/2017/10/crochet-helps-brain/)

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# What is Amigurumi?

Amigurumi in Japanese is the art of crocheting or knitting stuffed animal toys. Ami = Crocheting or knitting. Grumi = Stuffed toys.

## Amigurumi Basics

- Work in round
- Start with Chain 2 or a Magic Ring
- Most common stitches: Single Crochet (SC), Increase and Decrease
- Safety eyes
- Polyester filling



# Slipknot



# Chain



Slipknot

Yarn Over

Pull Through

# Magic Ring



# Work in around: Single Crochet (SC)



Insert your hook into the second chain from the hook



Insert your hook into the second chain from the hook



Pull Through (two loops on the hook)



Yarn Over



Pull Through (one loop on the hook)

## Work in around: Increase



6 **SC** in a magic ring  
(total= 6 **SC**)



2 **SC** in each **SC** in the  
previous row  
(total= 12 **SC**)



1 **SC** in the next **SC** followed by 2 **SC**  
in the next stitch  
(total= 18 **SC**)

## Work in around: Decrease



Insert your hook into the front loop of the next 2 stitches



Yarn over



Pull through



# Steps

Use baby yarn (super fine size 1 yarn).

Hook size: 2.5 mm

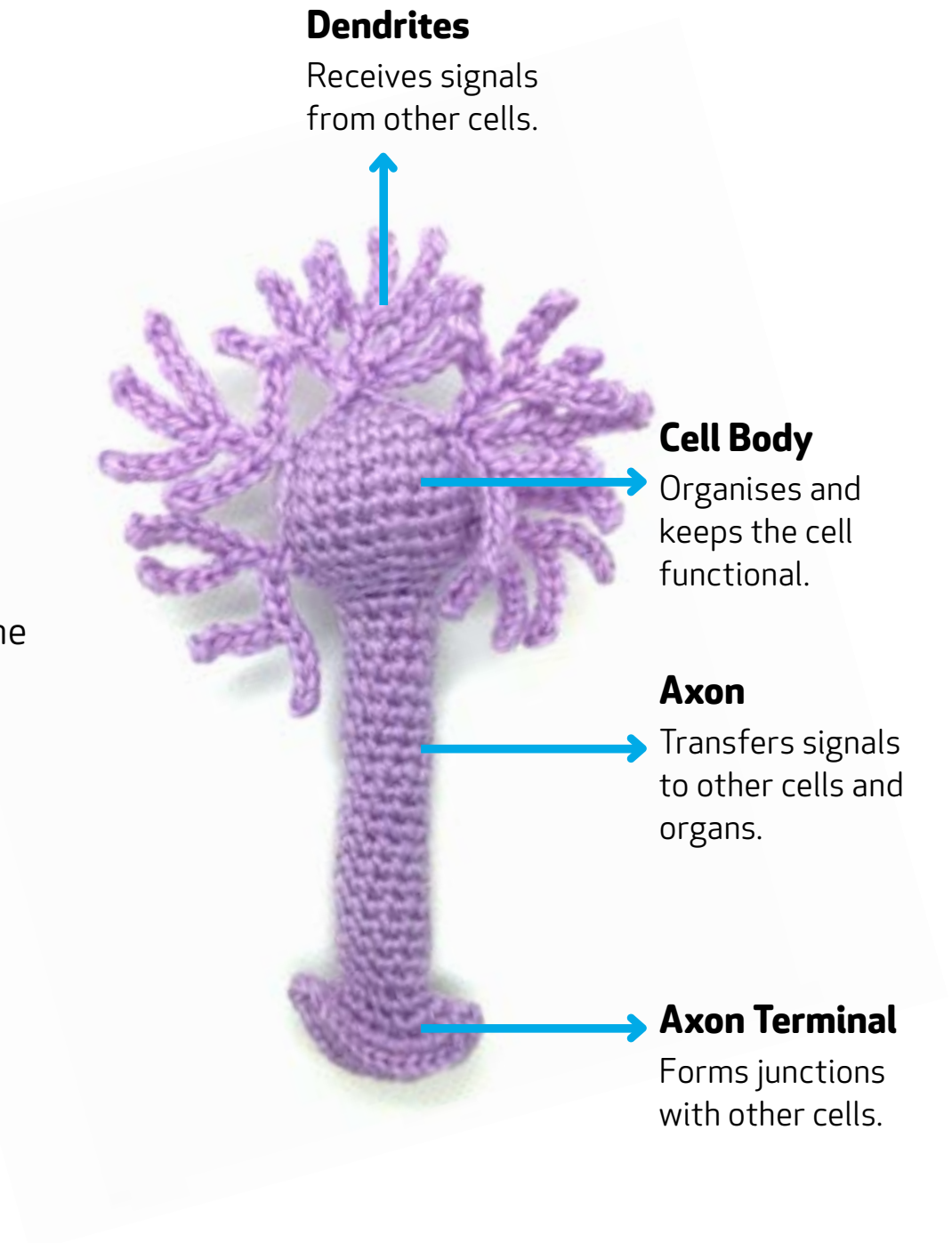
SC: Single Crochet.

## Cell Body

1. Start with making 6 **SC** in a Magic Ring (6).
2. 2 **SC** in each stitch (12).
3. 1 **SC** in the first stitch followed by 2 **SC** in the next stitch (18) Polyester filling
- 4-6. **SC** around (18).
7. 1 **SC** followed by decrease (12).
8. **Decrease** around (6).

Fill in using polyester filling.

**Don't fasten off.** Proceed to the axon pattern.



# Steps

## Axon

8- until you reach the desired length: **SC** around (6) Don't fasten off. Proceed to dendrites pattern.

## Axon Terminal

1. 2 **SC** in each stitch from the previous row (12).
2. 2 **SC** in each stitch around (24).
3. Fasten off and leave long tail to sew the two ends

## Dendrites

Start anywhere on the cell body, attach your yarn by slip stitch.

1. Chain 9 then 4 slip stitch in every stitch back the way toward the body.

Chain 4 and slip stitch all the way to the cell body.

2. Skip 3 stitches and repeat Step 1.
3. Continue till you reach the last stitch on the body.

Fasten off and wave the tail.

You can add more extensions with different length (use your imagination).

# Types of Neurons



## Unipolar

The simplest class of neurons that exhibit a single extension that gives rise to branches, some of which are receptive (dendrites).



## Bipolar

Central neurons of the retina which carry light-elicited signals from photoreceptors and horizontal cells in the outer retina to amacrine cells and ganglion cells in the inner retina.



## Multipolar

Neurons that possess a single axon and many dendrites (and dendritic branches), allowing for the integration of a great deal of information from other neurons.