

## SYMBOLS










































## Angles, Triangles, and Circles

$\wedge$	above • diastolic blood pressure (anesthesia records) • elevated • enlarged • improved • increased • superior (position) • upper	$\Delta P$	change in (intraocular) pressure
$\vee$	below • decreased • deficiency • deficit • depressed • deteriorated • diminished • down • inferior (position) • lower • systolic blood pressure (anesthesia records)	$\Delta pH$	change in pH
$>$	causes • demonstrates • distal • followed by • derived from • greater than • indicates • leads to • more severe than • produces • radiates to • radiating to • results in • reveals • shows • to • toward • worse than • yields	$\Delta t$	time interval
$<$	caused by • derived from • less severe than • less than • produced by • proximal	$\Delta H, \Delta A$	Hesselbach triangle
$\sphericalangle$	angle • flexion • flexor	$\circ$	respiration (anesthesia records)
$\sphericalangle_E$	angle of entry	$\text{♀}$	female • female sex
$\sphericalangle_X$	angle of exit	$\text{♂}$	male • male sex
$\lrcorner$	factorial product • right lower quadrant	$\textcircled{A}, \textcircled{ax}$	axilla (temperature)
$\ulcorner$	right upper quadrant	$\textcircled{H}, \textcircled{h}$	hypodermic • hypodermically
$\llcorner$	left upper quadrant	$\textcircled{IM}$	intramuscular • intramuscularly
$\lrcorner$	left lower quadrant	$\textcircled{IV}$	intravenous • intravenously
$\Delta$	anion gap • centrad prism • change • delta gap • heat • increment • occipital triangle • prism diopter • temperature (anesthesia records)	$\textcircled{L}$	left
$\Delta+$	time interval	$\textcircled{M}$	murmur
$\Delta A$	change in absorbance	$\textcircled{m}$	by mouth • mouth (temperature) • murmur
$\Delta dB$	difference in decibels	$\sqrt{\textcircled{m}}$	factitial murmur
		$\textcircled{O}$	by mouth • oral • orally
		$\textcircled{R}$	rectal • rectally • rectum (temperature) • right
		$\textcircled{X}$	end of anesthesia (anesthesia records) • end of operation

## Arrows

$\uparrow$	above • elevated • elevation • enlarged • gas • greater than • improved • increase • increased • increases • more than • rising • superior (position) • up • upper	$\searrow$	decreasing
$\uparrow g$	increasing • rising	$\rightarrow$	approaches limit of • causes demonstrates • direction of flow or reaction • distal • due to • followed by • indicates • leads to • produces • radiating to • results in • reveals • shows • to • to right • toward • yields
$\uparrow V$	increase due to in vivo effect (laboratory)	$\leftarrow$	caused by • derived from • direction of flow or reaction • due to • produced by • proximal • resulting from • secondary to • to left
$\downarrow$	below • decrease • decreased • deficiency • deficit • depressed • depression • deteriorated • deteriorating • diminished • diminution • down • falling • inferior (position) • less than • low slower • normal plantar reflex • precipitate • precipitates	$\uparrow\uparrow$	extensor response (Babinski sign) • positive Babinski sign • testes undescended
$\downarrow g$	decreasing • diminishing • falling • lowering	$\downarrow\downarrow$	down bilaterally • plantar response (Babinski sign) • testes descended
$\downarrow V$	decrease due to in vivo effect (laboratory)	$\downarrow\uparrow$	reversible reaction • up and down
$\nearrow$	deviated • displaced • increasing	$\rightleftharpoons$	reversible (chemical) reaction

## Genetic Symbols

	male		proband or probandus (first affected family member coming to medical attention)
	female		examined professionally • normal for trait
	sex unspecified		not examined • dubiously reported to have trait
	normal individuals		not examined • reliably reported to have trait
	affected individual (with $\geq 2$ conditions, the symbol is partitioned and shaded with a different fill defined in a key or legend)		heterozygotes for autosomal recessive
	multiple individuals, number known (number of siblings written inside symbol)		carrier of sex-linked recessive
			death
			stillbirth (SB)
	mating		pregnancy (P); gestational age and karotype (if known) below symbol
	consanguinity		
(+)	uncommon or uncertain mode of inheritance		
	parents and offspring, in generations		consultand (individual seeking genetic counseling/testing)
			
	dizygotic twins		spontaneous abortion; ECT written below symbol indicates ectopic pregnancy
	monozygotic twins		
	number of children of sex indicated		affected spontaneous abortion (gestational age, if known, below symbol, and key or legend used to define shading)
			
	adopted individuals		termination of pregnancy (TOP)
	individual died without leaving offspring		
	no issue		affected TOP (key or legend used to define shading)
	affected individuals		

Source: Genetic symbols are public domain: we credit and gratefully acknowledge the *American Journal of Human Genetics* (56:746–747, 1995) as our source for these symbols.

## Numbers

<b>0</b>	completely absent (pulse) no response (reflexes)	<b>4+</b>	hyperactive (reflexes) large amount (laboratory tests) pronounced reaction (laboratory tests)
<b>+1, 1+</b>	markedly impaired (pulse)	<b>•</b>	very brisk (reflexes)
<b>1+</b>	low normal or somewhat diminished (reflexes) slight reaction or trace (laboratory tests)	<b>I</b>	bowel movement (numeral indicates number of stools in a given period)
<b>+2, 2+</b>	moderately impaired (pulse)	<b>1×</b>	once one time
<b>2+</b>	average or normal (reflexes) noticeable reaction or trace (laboratory tests)	<b>2×, ×2</b>	twice two times
<b>+3, 3+</b>	slightly impaired (pulse)	<b>3×, ×3</b>	three times, etc.
<b>3+</b>	moderate reaction (laboratory tests) more brisk than average (reflexes)		
<b>+4, 4+</b>	normal (pulse)		

Arabic	Roman	Arabic	Roman
0		17	XVII
1	I,	18	XVIII
2	II, ii	19	XIX
3	III, iii	20	XX
4	IV, iv	30	XXX
5	V, v	40	XL
6	VI, vi	50	L
7	VII, vii	60	LX
8	VIII, viii	70	LXX
9	IX, ix	80	LXXX
10	X, x	90	XC
11	XI, xi	100	C
12	XII, xii	1,000	M
13	XIII, xiii	5,000	$\bar{V}$
14	XIV, xiv	10,000	$\bar{X}$
15	XV	100,000	$\bar{C}$
16	XVI	1,000,000	$\bar{M}$

#### Pluses, Minuses, and Equivalencies

+	acid (reaction) • added to • convex lens • decreased or diminished (reflexes) • excess • less than 50% • inhibition of • hemolysis (Wassermann) • low normal (reflexes) • markedly impaired (pulse) • mild (severity) • plus • positive (laboratory tests) • present • slight reaction or trace (laboratory tests) • sluggish (reflexes) • somewhat diminished (reflexes)	(-)	insignificant
(+)	significant	±	doubtful • either positive or negative • equivocal (reflexes, qualitative tests) • flicker (reflexes) • indefinite • more or less • plus or minus • possibly significant • questionable • suggestive • variable • very slight (reaction, severity, trace) • with or without
(+)	positive	(±)	possibly significant
+ to ++	slight pain	± to +	minimal pain
++	average (reflexes) • 50% inhibition of hemolysis (Wassermann) • moderate (pain, severity) • moderately impaired (pulse) • normally active (reflexes) • noticeable reaction or trace (laboratory tests)	∓	minus or plus
+++	increased reflexes 75% inhibition of • hemolysis (Wassermann) • moderate amount • moderate reaction (laboratory tests) • moderately, hyperactive (reflexes) • moderately severe (pain, severity) • more brisk than average (reflexes) • slightly impaired (pulse)	‡	moderate (severity) • normally active (reflexes)
++++	complete inhibition of hemolysis (Wassermann) • large amount (laboratory tests) • markedly hyperactive (reflexes) • markedly severe (pain, severity) • normal (pulse) • pronounced reaction (laboratory tests) • very brisk (reflexes)	#	fracture • gauge • number • pound(s) • weight
-	absent • alkaline (reaction) • concave lens • deficiency • deficient • minus • negative (laboratory test) • none • subtract • without	~	about • approximate • approximately • proportionate to
		≈	approximately equal to
		=	equal to
		≠	not equal to
		⊕	combined with
		⊖	equivalent
		⊗	not equivalent to
		≡	identical • identical with
		≠	not identical • not identical with
		≈	nearly equal to
		≐	approximately equal
		≐	approximately • approximately equals • congruent to

(continued)

### Pluses, Minuses, and Equivalencies (*continued*)

$\doteq$	approaches	$<$	less than
$\pm$	equilateral	$\leq$	not less than
$\triangle$	equiangular	$\geq, \ni$	greater than or equal to
$>$	greater than	$\leq, \leq$	less than or equal to
$\nabla$	not greater than	$?$	doubtful • equivocal (reflexes) • flicker (reflexes)

### Primes, Checks, Dots, Roots, and Other Symbols

$?$	• not tested (severity) • possible • questionable • question of • suggested • suggestive (severity) • unknown	$\surd, \surd_{ng}$	checking
$!$	factorial product	$\surd_{qs}$	voided sufficient quantity
$\dagger$	death • deceased	$\surd$	radical root
$/$	divided by • either meaning • extension • extensors fraction • of • per • to	$\surd^{\circ}$	square root
$'$	foot • hour • univalent	$\surd^{\vee}$	cube root
$"$	bivalent • ditto • inch • minute • second (1/60 degree)	$*$	birth • multiplication sign (genetics) • not verified • presumed • supposed
$'''$	line (1/12 inch) • trivalent	$\circ$	degree • measurement (1/360 of circle) • severity (burns, wounds) • temperature • time (hour)
$\surd$	check • observe for • urine • voided (urine)	$:$	is to • ratio
$\surd$	urine and defecation • voided and bowels moved	$\dots$	no data (in given category)
$\surd_{\text{c}}$	check with	$\therefore$	therefore
$\surd_{\text{d}}$	checked • observed	$\because$	because
		$\therefore$	as • equality between ratios • proportion • proportionate to

### Statistical Symbols

$\alpha$	probability of Type I error significance level	$O$	observed frequency in a contingency table
$\beta$	probability of Type II error	$\phi$	ability continuum phi coefficient
$1-\beta$	power of statistical test	$P$	probability
$n^C_k; \binom{n}{k}$	binomial coefficient number of combination of $n$ things taken $k$ at a time	$p$	probability of success in independent trials
$\chi^2$	chi-squared statistic	$P(A)$	probability that event $A$ occurs
$E$	expected frequency in cell of contingency table	$P(A B)$	conditional probability that $A$ occurs given that $B$ has occurred
$E(X)$	expected value of random variable $X$	$r$	sample correlation coefficient, usually the Pearson product-moment correlation
$F$	$F$ statistic (variance ratio)	$r^2$	coefficient of determination
$f$	frequency	$r_s$	Spearman rank correlation coefficient
$H_0$	null hypothesis	$\rho$	population correlation coefficient
$H_1$	alternative hypothesis	$s$	sample standard deviation
$\mu$	population mean	$s^2$	sample variance
$N$	population size	$SE$	standard error of estimate
$n$	sample size	$\sigma$	population standard deviation
$n!$	$n$ factorial	$\sigma^2$	population variance

$\sigma_{\text{diff.}}$	standard error of difference between scores	$\sqrt{x}$	square root of x
$\sigma_{\text{est.}}$	standard error of estimate	=	equal
$\sigma_{\text{meas.}}$	standard error of measurement	$\neq$	not equal
$\sum_{i=1}^n x_i, \sum_{i=1}^n x_i$	$x_1 + x_2 + \dots + x_n$	$\approx$	approximately equal
$t$	Student $t$ statistic Student test variable	$>$	greater than
$\theta$	latent trait	$\nlessgtr$	not greater than
$U$	Mann-Whitney rank sum statistic	$<$	less than
$W$	Wilcoxon rank sum statistic	$\nlessgtr$	not less than
$\bar{X}$	sample mean	$\geq, \supseteq$	greater than or equal to
$ x $	absolute value of x	$\leq, \subseteq$	less than or equal to
		$\infty$	infinity