



**KJ-REGRESSION MODEL TO EVALUATE
OPTIMAL MASSES OF EXTREME CASES**
<http://www.ngds-ku.org/Papers/J34.pdf>



SELECTED PROFILES

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Additional File 2
Extreme Cases Processed using KJ-Regression Model

compare results with http://www.ngds-ku.org/Papers/J30/Additional_File_2.pdf

Table 1. Complete listing of extreme cases

Case No.	$P(\mu)$	$P(h)$	$P(h_{MP})$	Page No.
01	< 3	< 3	< 3	02
02	< 3	< 3	$3 \leq P(h_{MP}) \leq 97$	03
03	< 3	< 3	> 97	
04	< 3	$3 \leq P(h) \leq 97$	< 3	
05	< 3	$3 \leq P(h) \leq 97$	$3 \leq P(h_{MP}) \leq 97$	04
06	< 3	$3 \leq P(h) \leq 97$	> 97	
07	< 3	> 97	< 3	
08	< 3	> 97	$3 \leq P(h_{MP}) \leq 97$	
09	< 3	>	> 97	
10	$3 \leq P(\mu) \leq 97$	< 3	< 3	
11	$3 \leq P(\mu) \leq 97$	< 3	$3 \leq P(h_{MP}) \leq 97$	
12	$3 \leq P(\mu) \leq 97$	< 3	> 97	
13	$3 \leq P(\mu) \leq 97$	$3 \leq P(h) \leq 97$	< 3	05
14	$3 \leq P(\mu) \leq 97$	$3 \leq P(h) \leq 97$	$3 \leq P(h_{MP}) \leq 97$	06
15	$3 \leq P(\mu) \leq 97$	$3 \leq P(h) \leq 97$	> 97	
16	$3 \leq P(\mu) \leq 97$	> 97	< 3	
17	$3 \leq P(\mu) \leq 97$	> 97	$3 \leq P(h_{MP}) \leq 97$	
18	$3 \leq P(\mu) \leq 97$	> 97	> 97	
19	> 97	< 3	< 3	
20	> 97	< 3	$3 \leq P(h_{MP}) \leq 97$	
21	> 97	< 3	> 97	
22	> 97	$3 \leq P(h) \leq 97$	< 3	
23	> 97	$3 \leq P(h) \leq 97$	$3 \leq P(h_{MP}) \leq 97$	
24	> 97	$3 \leq P(h) \leq 97$	> 97	
25	> 97	> 97	< 3	
26	> 97	> 97	$3 \leq P(h_{MP}) \leq 97$	
27	> 97	> 97	> 97	

- Profiles of selected cases are shown on page numbers given in the last column (*MP*: mid-parental)
- All dates are entered in the format: YYYY-MM-DD (year-month-day)
- For height status, (+) [(-)]means child has excess (lesser) height-for-*MP*-height, but is not considered tall [stunted];
- For mass status, (+) [(-)] means child has excess (lesser) mass-for-height, but is not considered obese [wasted]

COLOR CODES FOR STATUSES		<1%	Hue 085, Sat 255, Lum 064	Red 000, Green 128, Blue 000
		1-10%	Hue 042, Sat 255, Lum 128	Red 255, Green 255, Blue 000
		>10%	Hue 000, Sat 255, Lum 092	Red 184, Green 000, Blue 000

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Case Number 1: $P(\mu) < 3 \cdot P(h) < 3 \cdot P(h_{MP}) < 3$

SGPP-KHI-20100421-01/02

Table 2. Adult-mid-parental (Target) heights

Father's Height: 162.20 cm • Mother's Height: 149.30 cm

$BOY/GIRL=(FATHER+MOTHER \pm 13)/2$	Boy	Girl
Adult-MP (Target) Height (cm)	162.25	149.25
Adult-MP Height (ft-in)	5 ft 3.88 in	4 ft 10.76 in
Percentile-of-MP Height	2.59	2.15

Table 3. Growth-and-Obesity Profile of M. Z.

Gender: Male • Date of Birth: 1997-01-07

Check up	1 st
Date of Checkup	2011-05-22
Age (years)	14.37
Dress Code	1.5/2
Undressing	0/0.5
Height (cm)	145.50
Height (ft-in)	4 ft 9.28 in
Percentile-of-Height	1.00
Estimated-Adult Height (cm)	158.51
Estimated-Adult Height (ft-in)	5 ft 2.41 in
Mid-Parental-Height Percentile	2.59
Current-Age-MP Height (cm)	147.36
Δ Height-for-Age (cm)	-1.86
Δ Height-for-Age (in)	-1.86
STATUS(h)	1.26% STUNTED
Gross Mass (kg)	31.50
Clothing Correction (kg)	0
Net Mass (kg)	31.50
Net Weight (lb-oz)	69 lb 7.32 oz
Percentile-of-Net-Mass	0.79
Estimated-Adult Mass (kg)	45.39
Estimated-Adult Weight (lb-oz)	100 lb 1.46 oz
BMI: Body-Mass Index (kg/m ²)	14.88
Estimated-Adult BMI (kg/m ²)	18.07
Optimal Mass (kg)	33.24
Optimal Weight (lb-oz)	73 lb 4.53 oz
Δ Mass-for-Height (kg)	-1.74
Δ Weight-for-Height (lb-oz)	-3 lb 13.21 oz
STATUS(μ)	5.22% WASTED

Case Number 2: $P(\mu) < 3 \cdot P(h) < 3 \cdot 3 \leq P(h_{MP}) \leq 97$

SGPP-KHI-20100421-03/02

Table 4. Adult-mid-parental (Target) heights

Father's Height: 166.80 cm • Mother's Height: 171.00 cm

$BOY/GIRL=(FATHER+MOTHER \pm 13)/2$	Boy	Girl
Adult-MP (Target) Height (cm)	175.40	162.40
Adult-MP Height (ft-in)	5 ft 9.06 in	5 ft 3.94 in
Percentile-of-MP Height	43.04	44.64

Table 5. Growth-and-Obesity Profile of A. E.

Gender: Male • Date of Birth: 2005-02-19

Check up	1 st
Date of Checkup	2011-05-22
Age (years)	6.25
Dress Code	1.5/1.5
Undressing	0/0.5
Height (cm)	106.20
Height (ft-in)	3 ft 5.81 in
Percentile-of-Height	2.35
Estimated-Adult Height (cm)	161.69
Estimated-Adult Height (ft-in)	5 ft 3.66 in
Mid-Parental-Height Percentile	43.04
Current-Age-MP Height (cm)	116.05
Δ Height-for-Age (cm)	-9.85
Δ Height-for-Age (in)	-3.88
STATUS(h)	8.48% STUNTED
Gross Mass (kg)	16.30
Clothing Correction (kg)	0
Net Mass (kg)	16.30
Net Weight (lb-oz)	35 lb 15.06 oz
Percentile-of-Net-Mass	2.39
Estimated-Adult Mass (kg)	51.97
Estimated-Adult Weight (lb-oz)	114 lb 9.38 oz
BMI: Body-Mass Index (kg/m ²)	14.45
Estimated-Adult BMI (kg/m ²)	19.88
Optimal Mass (kg)	16.26
Optimal Weight (lb-oz)	35 lb 13.72 oz
Δ Mass-for-Height (kg)	+0.04
Δ Weight-for-Height (lb-oz)	+1.34
STATUS(μ)	0.23% (+)

Case Number 5: $P(\mu) < 3 \cdot 3 \leq P(h) \leq 97 \cdot 3 \leq P(h_{MP}) \leq 97$

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Table 6. Adult-mid-parental (Target) heights

Father's Height: 169.30 cm • Mother's Height: 154.90 cm

$BOY/GIRL=(FATHER+MOTHER \pm 13)/2$	Boy	Girl
Adult-MP (Target) Height (cm)	168.60	155.60
Adult-MP Height (ft-in)	5 ft 6.38 in	4 ft 1.26 in
Percentile-of-MP Height	13.59	12.21

Table 7. Growth-and-Obesity Profile of E. M.

Gender: Female • Date of Birth: 1999-12-05

Check up	1 st
Date of Checkup	2009-02-05
Age (years)	9.17
Dress Code	1.5/2
Undressing	0/0.5
Height (cm)	128.15
Height (ft-in)	4 ft 2.45 in
Percentile-of-Height	19.15
Estimated-Adult Height (cm)	157.43
Estimated-Adult Height (ft-in)	5 ft 1.98 in
Mid-Parental-Height Percentile	12.21
Current-Age-MP Height (cm)	126.45
Δ Height-for-Age (cm)	+1.70
Δ Height-for-Age (in)	+0.67
STATUS(h)	1.34% TALL
Gross Mass (kg)	18.90
Clothing Correction (kg)	0
Net Mass (kg)	18.90
Net Weight (lb-oz)	41 lb 10.79 oz
Percentile-of-Net-Mass	1.13
Estimated-Adult Mass (kg)	38.98
Estimated-Adult Weight (lb-oz)	85 lb 15.10 oz
BMI: Body-Mass Index (kg/m ²)	11.51
Estimated-Adult BMI (kg/m ²)	15.63
Optimal Mass (kg)	25.36
Optimal Weight (lb-oz)	55 lb 14.80 oz
Δ Mass-for-Height (kg)	-6.46
Δ Weight-for-Height (lb-oz)	-14 lb 4.01 oz
STATUS(μ)	25.48% WASTED

Case Number 13: $3 \leq P(\mu) \leq 97 \bullet 3 \leq P(h) \leq 97 \bullet P(h_{MP}) < 3$

SGPP-KHI-20100421-01/03

Table 8. Adult-mid-parental (Target) heights

Father's Height: 162.2 cm • Mother's Height: 149.3 cm

$BOY/GIRL=(FATHER+MOTHER \pm 13)/2$	Boy	Girl
Adult-MP (Target) Height (cm)	162.15	149.15
Adult-MP Height (ft-in)	5 ft 3.84 in	4 ft 10.72 in
Percentile-of-MP Height	2.59	2.15

Table 9. Growth-and-Obesity Profile of Z. Z.

Gender: Male • Date of Birth: 2006-11-25

Check up	1 st
Date of Checkup	2011-05-22
Age (years)	4.49
Dress Code	1.5/1.5
Undressing	0/0.5
Height (cm)	101.40
Height (ft-in)	3 ft 3.92 in
Percentile-of-Height	18.69
Estimated-Adult Height (cm)	170.08
Estimated-Adult Height (ft-in)	5 ft 6.96 in
Mid-Parental-Height Percentile	2.59
Current-Age-MP Height (cm)	97.17
Δ Height-for-Age (cm)	+4.23
Δ Height-for-Age (in)	+1.67
STATUS(h)	4.35% TALL
Gross Mass (kg)	14.70
Clothing Correction (kg)	0
Net Mass (kg)	14.70
Net Weight (lb-oz)	32 lb 6.62 oz
Percentile-of-Net-Mass	8.36
Estimated-Adult Mass (kg)	57.51
Estimated-Adult Weight (lb-oz)	126 lb 12.86 oz
BMI: Body-Mass Index (kg/m ²)	14.30
Estimated-Adult BMI (kg/m ²)	19.88
Optimal Mass (kg)	15.49
Optimal Weight (lb-oz)	34 lb 2.38 oz
Δ Mass-for-Height (kg)	-0.79
Δ Weight-for-Height (lb-oz)	-1 lb 11.77 oz
STATUS(μ)	5.08% WASTED

Case Number 14: $3 \leq P(\mu) \leq 97 \bullet 3 \leq P(h) \leq 97 \bullet 3 \leq P(h_{MP}) \leq 97$

SGPP-KHI-20100421-03/03

Table 10. Adult-mid-parental (Target) heights

Father's Height: 166.80 cm • Mother's Height: 171.00 cm

$BOY/GIRL=(FATHER+MOTHER \pm 13)/2$	Boy	Girl
Adult-MP (Target) Height (cm)	175.40	162.40
Adult-MP Height (ft-in)	5 ft 9.06 in	4 ft 3.94 in
Percentile-of-MP Height	43.04	44.64

Table 11. Growth-and-Obesity Profile of Z. E.

Gender: Male • Date of Birth: 2007-11-21

Check up	1 st
Date of Checkup	2011-05-22
Age (years)	3.50
Dress Code	1.5/1.5
Undressing	0/0.5
Height (cm)	95.40
Height (ft-in)	3 ft 1.56 in
Percentile-of-Height	21.21
Estimated-Adult Height (cm)	170.82
Estimated-Adult Height (ft-in)	5 ft 7.25 in
Mid-Parental-Height Percentile	43.04
Current-Age-MP Height (cm)	97.94
Δ Height-for-Age (cm)	-2.54
Δ Height-for-Age (in)	-1.00
STATUS(h)	2.59% STUNTED
Gross Mass (kg)	14.00
Clothing Correction (kg)	0
Net Mass (kg)	14.00
Net Weight (lb-oz)	30 lb 13.92 oz
Percentile-of-Net-Mass	22.76
Estimated-Adult Mass (kg)	62.86
Estimated-Adult Weight (lb-oz)	138 lb 9.54 oz
BMI: Body-Mass Index (kg/m^2)	15.38
Estimated-Adult BMI (kg/m^2)	21.54
Optimal Mass (kg)	13.91
Optimal Weight (lb-oz)	30 lb 10.71 oz
Δ Mass-for-Height (kg)	+0.09
Δ Weight-for-Height (lb-oz)	+3.21 oz
STATUS(μ)	0.65% (+)

Web address of the main document:

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Additional File 2: EXTREME CASES PROCESSED BY KJ-REGRESSION MODEL

http://www.ngds-ku.org/Papers/J34/Additional_File_2.pdf