



Role of NEUD Natural Hair Inhibitor in Reducing Unwanted Body Hair Growth; As an Adjuvant Therapy with Waxing and With Normal Hair Removal Cream

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Background:

Unwanted facial and body hair plays role in one's cosmetic look, although unwanted hair is not detrimental to health but it is considered to affect the perfect look of person. Unwanted hair on the visible body parts like hands, legs, face and back are perceived as a problem for the picture perfect cosmetic look. People do use various methods so as to reduce the growth of unwanted hair and even tries permanent hair removal techniques. The permanent hair removal techniques tried by individual includes laser hair removals and other home and herbal remedies. Various reports have demonstrated the efficacy of herbal remedies for the reduction of hair growth especially the role of papaya in reduction of hair growth. Papaya contains an enzyme called papain¹ which acts on the hair follicles by wreaking their action to help grow hair. The appropriate combination of papain with other herbal ingredients having role in hair reduction can effectively restricts the growth of hair and help in achieving permanent hair growth reduction. NEUD Natural Hair Inhibitor is the scientific combination of herbal ingredients which includes carica papaya, Gymnema Sylvestre and others effectively restricts the growth of the hair resulting in permanent hair growth reduction. NEUD natural hair inhibitor if applied after hair removal seeps into the follicle cell level of hair and inhibits the growth of hair.

This study examines the effectiveness of NEUD natural hair inhibitor in long term hair reduction.

Materials and Methodology:

The placebo controlled and single blinded study was conducted on 800 subjects who had moderate or excessive hair growth. The hair color of the subjects was black & brown and total 05 cosmetic sites were studied (hands, legs, underarms, face, breast). The volunteers for the study were recruited who are on continuous look out for effective hair removal methods. The average age of studied subjects was 30 years.

The subjects like breast feeding, pregnant, patients on medicine were excluded from the study. The subjects had no dermatological or systematic disease. Out of total 800 subjects, 700 were female and 100 were male and the duration of the study was 90 days. The subjects were guided to use NEUD natural hair inhibitor as an adjuvant therapy to hair removal methods like Waxing and Hair Removal Cream.

The three groups were formed:

Group-1: 260 female and 40 male who chose waxing as hair removal method and applied NEUD natural hair inhibitor for 5 days, twice a day. This group applied NEUD natural hair inhibitor after every waxing session for 5 days. The waxing sessions were done every fortnight (after hair re-growth) and total 06 sessions of applications of NEUD natural hair inhibitor were followed in sync with the waxing.

Group-2: 260 female and 40 male who chose hair removal cream as hair removal method and applied NEUD natural hair inhibitor for twice a day continuously. Total 13 sessions of hair removal creams were followed with use of NEUD natural hair inhibitor for 90 days.

Group -3: 180 female and 20 male applied 0.9% saline twice a day after hair removal. 50% of this placebo group applied saline for 5 days after each waxing session and other half used hair removal cream followed by 0.9% saline twice a day.

Prior to the study, photographs of each cosmetic sites (05 sites) using standardized photography setting were taken, and these records in terms of hair density, hair counts were taken as baseline.

After every 30 days (includes 2 session of waxing with NEUD and average 04 sessions of hair removal cream with NEUD) were used to assess the result in terms of hair density (hair count in the examined area), regrowth of hair. The records were taken with the help of photographs, magnifying glass and subject's self assessment. Each session's records were compared with the records taken in the beginning of the study for cosmetic sites examined for the study.

Results:

The results reported by subjects after 30 days of the study showcased that approx 48% of subjects reported hair reduction in between of mild and moderate reduction of hair. The mean of the subjects reporting in reduction in hair density (from no change to significant) and hair thickness was calculated. Both Group 1 and Group 2 experienced hair reduction, however average 52% of subjects experienced no change in hair reduction. In both the groups after 30 days, average 42% subjects noticed mild hair reduction and average 6% of subjects reported moderate hair reduction. After 30 days, none of the subjects in either group showed any significant hair reduction.

Observations after 30 days

Group-1												
Evaluation after 30 Days	Reduction in Hair Density				Average Thickness in Micron				Average % of subjects reporting hair reduction			
	No Change	Mild	Moderate	Significant	No Change	40-50	30-40	20-30	No Change	Mild	Moderate	Significant
Hands (N=300)	207	63	30	0	105	189	6	0	52	42	6	0
Legs (N=300)	207	63	30	0	105	189	6	0	52	42	6	0
Underarms (N=220)	152	46	22	0	77	139	4	0	52	42	6	0
Face (N=110)	76	23	11	0	38	69	3	0	52	42	6	0
Breast (N=30)	20	7	3	0	10	19	1	0	50	43	7	0

Group-2												
Evaluation after 30 Days	Reduction in Hair Density				Average Thickness in Micron				Average % of subjects reporting hair reduction			
	No Change	Mild	Moderate	Significant	No Change	40-50	30-40	20-30	No Change	Mild	Moderate	Significant

Hands (N=300)	204	66	30	0	111	186	3	0	52	42	6	0
Legs (N=300)	204	66	30	0	111	186	3	0	52	42	6	0
Underarms (N=220)	54	18	8	0	29	49	2	0	52	42	6	0
Face (N=110)	27	9	4	0	14	25	1	0	52	42	6	0
Breast (N=30)	17	5	3	0	9	15	1	0	52	40	8	0

Not all subjects used the therapy on all cosmetic sites. All subjects used the therapy on hands and legs, but the subjects who chose to use the therapy on other cosmetic sites differed and number are as mentioned in the tables of group 1 and group 2.

Group 3 showed no change in hair reduction and the normal hair growth was reported by each subject in the placebo group.

In the subsequent follow up with the subjects, the second evaluation was conducted after 60 days. In the evaluation cycle after 60 days, 07 subjects backed out from the study due to irregularity and non-compliance. 4 subjects from group-1 and 3 subjects from group-2 were not able to continue the study, these subjects had opted for all cosmetic sites therefore the drop influenced the no. of subjects for all cosmetic sites. The observation for both Group-1 and Group-2 are as below:

Observations after 60 days

Group-1												
Evaluation after 30 Days	Reduction in Hair Density				Average Thickness in Micron				Average % of subjects reporting hair reduction			
	No Change	Mild	Moderate	Significant	No Change	40-50	30-40	20-30	No Change	Mild	Moderate	Significant
Hands (N=300)	112	95	65	24	71	127	62	36	31	37	22	10
Legs (N=300)	112	95	65	24	71	127	63	35	31	37	22	10
Underarms (N=220)	82	69	48	17	52	93	45	26	32	37	21	10
Face (N=110)	40	34	23	9	25	46	22	13	32	37	21	10
Breast (N=30)	10	8	6	2	6	11	5	4	27	38	24	11

After 60 days, the subjects reported significant reduction in hair growth, on an average 10% of subjects reported significant reduction and 22% of subjects experienced moderate reduction in hair growth. Approx 37% of subjects have observed mild reduction in hair growth.

Group-2												
Evaluation after 60 Days	Reduction in Hair Density				Average Thickness in Micron				Average % of subjects reporting hair reduction			
	No Change	Mild	Moderate	Significant	No Change	40-50	30-40	20-30	No Change	Mild	Moderate	Significant

Hands (N=300)	119	92	62	24	80	125	59	33	33	36	21	10
Legs (N=300)	119	92	62	24	80	125	59	33	33	36	21	10
Underarms (N=220)	31	24	16	6	21	33	15	8	34	37	20	9
Face (N=110)	15	11	8	3	10	15	8	4	32	35	22	11
Breast (N=30)	9	7	5	1	6	9	4	3	32	36	23	9

The results for both Group-1 and Group-2 were almost identical. In Group-2, approx 10% (slightly lower than the Group-1) reported significant hair reduction, 21% of subjects observed moderate hair reduction whereas 36% experienced mild reduction in hair growth. Group-3 reported no change in hair reduction. In the final cycle of study, after 90 days, both Group-1 and Group-2 showed significant growth in hair reduction.

Observations after 90 days

Group-1												
Evaluation after 90 Days	Reduction in Hair Density				Average Thickness in Micron				Average % of subjects reporting hair reduction			
	No Change	Mild	Moderate	Significant	No Change	40-50	30-40	20-30	No Change	Mild	Moderate	Significant
Hands (N=300)	47	86	95	68	47	71	92	86	16	26	32	26
Legs (N=300)	47	86	95	68	47	71	92	86	16	26	32	26
Underarms (N=220)	34	63	69	50	34	52	67	63	15	27	32	26
Face (N=110)	17	31	34	24	17	25	33	31	16	26	31	27
Breast (N=30)	4	8	8	6	4	6	8	8	15	27	31	27

In the Group-1, approx 26% of subjects reported significant growth in hair reduction; approx 32% showed moderate hair reduction and approx 26% subjects showed mild hair reduction.

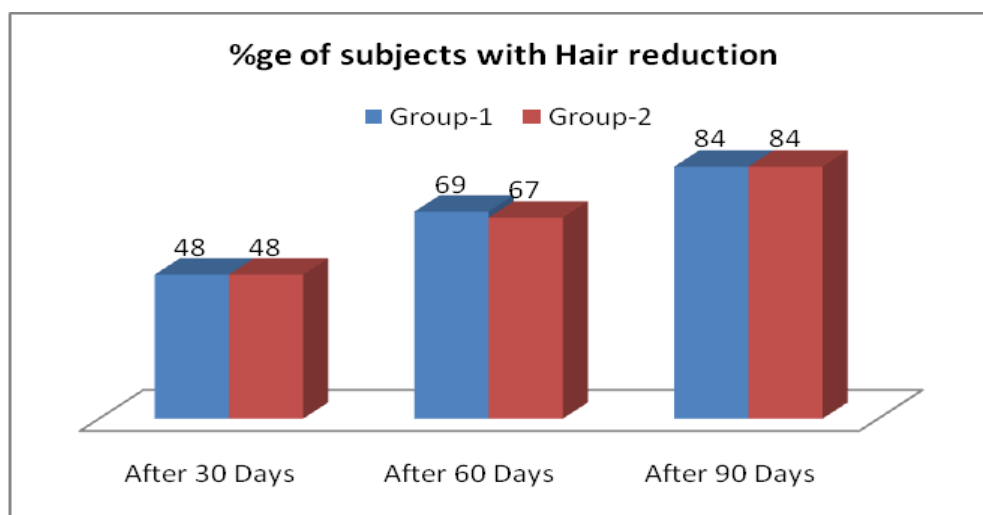
Group-2												
Evaluation after 90 Days	Reduction in Hair Density				Average Thickness in Micron				Average % of subjects reporting hair reduction			
	No Change	Mild	Moderate	Significant	No Change	40-50	30-40	20-30	No Change	Mild	Moderate	Significant
Hands (N=300)	50	89	92	66	50	77	95	75	16	28	32	24
Legs (N=300)	50	89	92	66	50	77	95	75	16	28	32	24
Underarms (N=220)	13	23	24	17	13	20	24	20	16	28	33	23
Face	6	11	11	9	6	10	12	9	16	27	33	24

(N=110)												
Breast (N=30)	4	6	7	5	4	5	7	6	18	27	32	23

In Group-2, approx 23% subjects showed significant hair reduction, 32% of subjects experienced moderate hair reduction followed by 27% subjects reporting mild hair reduction.

Results:

NEUD Natural Hair Inhibitor if used as an adjuvant therapy after hair removal (Waxing, Hair Removal Cream) showed effective results in reducing unwanted hair growth. In both groups (with waxing, Hair removal cream) approx 84% of subjects experienced reduction in hair growth in 90 days. 84% of participants in both active groups experienced reduction in hair density and hair thickness resulting into overall hair growth reduction. The placebo group registered no change in reduction of unwanted hair, however in both active groups approx 16% subjects observed no reduction in hair growth. The results were steady both in male and female, there was no significant difference in terms of rate of reduction of hair growth in male & female as noticed.



Conclusion:

The objective evaluation showed that in the study group as a whole, average 84% of subjects reported hair reduction in 90 days with continuous use of NEUD Natural Hair Inhibitor applied after hair removal methods.

References:

1. Histological evaluation of hair follicle due to papain's depilatory effect. Traversa E, Machado-Santelli GM, Velasco MV. International Journal of Pharmaceutics, 2007