

The effects of massage therapy on the human immune response in healthy adults

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FROM ABSTRACT:

Little scientific investigation has been conducted to examine objectively the belief that massage therapy can effect the immune system of healthy people.

If there are any links between massage therapy and improved immune function, the mechanisms by which they operate are not known.

This study evaluated the effects of massage therapy on immune functions of two healthy females.

Using a single-case experimental ABAB design, two subjects received a relaxing massage during the experimental phases (B) and no massage during baseline phases (A).

Assays were conducted for T and B lymphocyte mitogen-induced proliferation, enumeration of T and B lymphocyte subsets, quantification of immunoglobulins A, G and M (IgA, IgG, IgM) and cortisol levels.

Trait and state anxiety levels were also examined.

The results indicated a consistent and significant trend of increased activity of both T and B lymphocytes and levels of serum IgG for both subjects during the B phases compared to the A phases. **[IMPOPRTANT, as IgG fights infection]**

There were no other significant differences between experimental and control conditions for the remaining measures, although serum IgM levels approached significance.

The study of the effects of massage therapy poses an exciting challenge in psychoneuroimmunology.

THESE AUTHORS ALSO NOTE:

The benefit of massage therapy may be due, in part, to its ability to reduce stress and thereby enhance immune responses. **[Stress increases the production of catecholamines (nor-epinephrine from the sympathetic nervous system, and epinephrine from the adrenal medulla) which reduces the immune response]**

Two subjects received a one-hour full body Swedish massage once a week for 4 weeks. 50 ml of their blood was drawn once per week for 18 weeks and assessed for concentrations of immunoglobulins, cortisol, and B and T lymphocyte function. Blood was drawn prior to the massage during the first 4 weeks.

RESULTS

"Both subjects demonstrated a statistically significant increase in the median levels of both T and B cell activity."

"Serum levels of IgG increased significantly during the treatment phases."

[IMPORTANT, IgG primarily fights infection]

Serum levels of cortisol did not decrease significantly for both subjects during the massage treatment phase.

CONCLUSIONS

"The results demonstrated a consistent and statistically significant increase in the proliferative response of both T and B lymphocytes during the massage therapy compared with receiving no massage."

"There was also a statistically significant increase in the levels of serum IgG as a result of massage therapy."

"These findings demonstrated that massage therapy can produce some measurable immunomodulation."

"These results suggest that cellular immunocompetence may be enhanced by massage therapy."

"It is possible that increased T and B cell function enables the immune system to be more prepared to combat disease, and have an increased capacity to augment a more effective response to a challenge by an infectious agent."

"IgG is the major immunoglobulin in human serum, accounting for approximately 75% of the total immunoglobulin pool."

"The results of significantly increased levels of activity in T and B lymphocytes and levels of serum IgG during massage therapy may indicate an increased capacity to respond more rapidly to an immunological challenge."

"This research suggests that massage positively influences the human immune response."

COMMENTS FROM DAN MURPHY

In this study, IgG, which fights infection, significantly increased with massage therapy.

However, cortisol (adrenal cortex stress hormone) levels did not significantly reduce with massage.

Therefore, it is doubtful that the enhanced function of the immune system was a consequence of reduced stress.

Rather, this article further supports the chiropractic premise that improved mechanical afferentation improves the function of the immune system.

Perhaps the best explanation is that mechanical afferents have been shown to synapse in lamina VII of the spinal cord where they can influence the traffic on the sympathetic nervous system (Jiang, SPINE, January 1997).

The sympathetic nervous system neurologically controls immunity (Elenkov, Pharmacological Reviews, December, 2002).