Might a pleasure improve anhedonia and depression?

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Abstract

Introduction
Anhedonia (a reduction of the ability to feel pleasure) is considered a key symptom in major depression and may influence some of its most important symptoms, such as apathy, difficulty in concentrating and maintaining attention, and gloomy mood. Various pleasurable sensations seem to be useful both in anhedonia and in depression. These pleasures are more intense than the usual daily ones, and their greater intensity could mean they can still be felt by a certain number of anhedonic individuals.

Hypothesis
Feeling a pleasant stimulus enhances the user’s sensitivity to subsequent rewards, so subsequent pleasures can be felt more strongly for a certain time. In this way, a pleasure strong enough to be still felt by some anhedonic individuals might reinforce their sensitivity to other rewards, enabling them to regain previously faded or lost pleasures, hence improving the anhedonia.

Evaluation of Hypothesis
Anhedonia is a key symptom of major depression and may influence some of its symptoms; hence an improvement in anhedonia, produced by a pleasure strong enough to be felt, might positively influence the life of depressed people.

Consequences of Hypothesis
Since many symptoms of depression could be influenced by anhedonia, ameliorating anhedonia may alleviate also these symptoms of depression.

Conclusion
A pleasure, strong enough to be felt, might allow anhedonic and depressed persons to regain, for a certain time, previously lost normal pleasures, thus enabling them to temporarily lead a more enjoyable life.

Introduction
Anhedonia is considered a key symptom of major depression and may influence some important symptoms of depression. Consider for example the apathy of depressed people. Any action is normally aimed at achieving some kind of reward. Even escaping from an unpleasant or painful situation is rewarding, and this reward is a possible cause of the approach toward safety in stressful situations. If we no longer feel satisfaction, the desire to move to achieve it may be reduced or lost, and varying levels of apathy may result. Difficulty in concentrating and maintaining attention might also be related to anhedonia. Feeling pleasure seems to be able to influence our ability to perceive and link sensory information and our capacity for learning. In humans anhedonia reduces cognitive processes both in the first automatic phase and in the subsequent phases of processing sensations. In animals, when two separate stimuli that singly do not procure pleasure are mentally connected, the new link between them substantially raises the level of dopamine in the nucleus accumbens, which is known to induce pleasure, and this is considered an important factor in learning in general. In humans the pleasure linked to expecting or experiencing something new facilitates learning and memory in situations where there are new stimuli, and the same is true for the pleasure of satisfying curiosity. All these considerations suggest that the scant capacity for application of depressed patients may at least partly depend on their low level of pleasure in perceiving and connecting stimuli. The gloomy mood of a depressed person might also depend on anhedonia, as it may be partly explained by having to lead a life without normal pleasures and not being able to be satisfactorily active.

Discussion
Various pleasurable sensations seem to be useful in both anhedonia and depression. Depressed persons sometimes use sweet or fatty food as self-medication, and some researchers believe this is to compensate the loss of sensitivity to natural rewards due to anhedonia. Opioids have a role in the treatment of depression, and drugs of abuse seem to be used by anhedonic persons, with or without psychiatric disorders, in an attempt to reduce their reward deficit. In rats, an enriched environment can improve anhedonia, and even the mere announcement of an enriching environment can have the same effect. The announcement of sugar improves anhedonia and prevents anhedonia developing in stressed rats. Sweet or fatty foods relieve depression in rats, and so does an enriched environment.

The rewards that can positively influence anhedonia and depression give a pleasure more intense than the usual daily rewards. For instance, an enriched environment involves continuous novelty and novelties give particularly strong pleasure. Even the announcement of an enriching environment can give intense pleasure, as waiting for a pleasure is itself an intense experience.
The Hypothesis
But how could a reward positively influence anhedonia that is enable anhedonic individuals to feel normal daily pleasures again and to maintain this ability for a certain time?

One possible answer could be suggested by a particular property of pleasant stimuli: they not only give pleasure but also enable subsequent pleasures to be felt more strongly for some time. For instance, a single drug dose enhances the user’s sensitivity to subsequent rewards, be they further drugs26,27 or normal sources of enjoyment like food or social play28,30–34. Normal pleasures, in turn, can enhance the pleasure given by drugs28,39 and other normal pleasures35, so that in the end “the perceived value of present reward is built upon past reward exposure”36, p. 10277.

On this basis we propose the hypothesis that a pleasure strong enough to be still felt by some anhedonic individuals (as might be the case of the rewards mentioned) could enhance their sensitivity to other rewards, thus enabling them to regain previously faded or lost normal pleasure and to lead a more gratifying life for a certain time.

Evaluation of Hypothesis
Anhedonia is a key symptom of major depression and may influence some of its symptoms, hence an improvement in anhedonia, produced by a pleasure strong enough to be felt, might positively influence the life of depressed people.

Consequence of Hypothesis
This hypothesis could help explain why some intense pleasures such as sweet or fatty foods, or drugs of abuse are sought by anhedonic people as self-medication35,37, why opioids can be used in the treatment of major depression38,39, and perhaps it may also contribute to explain the high frequency of comorbidity between drug of abuse and psychiatric diseases such as major depression38 and schizophrenia40,41, in which anhedonia is considered a hallmark symptom41.

Discussion
According to the hypothesis proposed, the possibility to experience a pleasure could be particularly important for anhedonic persons with or without psychiatric diseases because a pleasure not only could give them a brief respite from a distressing life without satisfactions, but it could also allow them to recover for a certain time the ability to feel normal daily pleasures that were previously lost (for example, the pleasures derived from human contacts, or the pleasures gained in learning processes, or other pleasures important for their everyday life), thus making their life temporarily more colourful and liveable.

Conclusion
A pleasure, strong enough to be felt, might allow anhedonic and depressed persons to regain, for a certain time, previously lost normal pleasures, thus enabling them to temporarily lead a more enjoyable life.

References
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