Panic Disorder
A disorder characterised by recurrent panic attacks about which there is persistent concern. May or may not be associated with anxiety about, or avoidance of, places or situations from which escape might be difficult (or embarrassing) or in which help may not be available in the event of having a panic attack or panic-like symptoms (Agoraphobia).

(DSM-IV)
Panic Disorder with/without Agoraphobia.
Agoraphobia without Panic Disorder.
Recurrent uncued panic attacks (ICD-10 says three or more attacks in a three week period), followed by concern, worry about the implications or change in behaviour resulting. Not caused by an organic cause, not better accounted for by another condition. No criteria requiring disability or distress.

*Panic Disorder*
A discrete period in which there is the sudden onset of intense apprehension, fearfulness, or terror, often associated with feelings of impending doom.

(DSM-IV)

Types of panic attacks: uncued panic attacks, situationally bound (cued) panic attacks, situationally predisposed panic attacks. In Panic Disorder the panic attacks are initially uncued.
DSM-IV criteria for a panic attack.
DSM-IV criteria for Agoraphobia.
Panic attacks last on average about 15 mins. Improvement with removal from situation or staying in situation. Role of learning and reinforcement. Limited symptom panic attacks are common and can reinforce behaviour and cognitions as much as full panic attacks.
Main fears- open spaces, closed spaces, shopping, crowds, travelling on buses or trains, social situations.
75% female.
May also experience depersonalisation, dizziness, depression.
Association with Introversion in personality.
6 month prevalence- 0.6-1 %
Women more frequently affected than men.
Ages 25-44 highest rates.
Rate 0.4%
Patients with Panic Disorder were the patient group with the highest use of psychotropic drugs, especially “minor tranquilisers” (BDZs).
Rate of Panic Disorder with/without Agoraphobia and Agoraphobia without Panic Disorder, 0.5% men, 0.8% women.

Other studies say up to 4 or even 6% prevalence!
First degree relatives of Panic Disorder patients had a 17.3% risk of the disorder. The risk was twice as high for women as it was for men. Panic Disorder patients did not have elevated rates of Generalised Anxiety Disorder, Alcohol misuse disorder, or Depression in first degree relatives.

*Family Predisposition*
Onset generally in teens to mid thirties. Lifetime and one-year prevalence rates are very similar indicating the disorder is chronic in its course. A lifetime “waxing and waning” disorder. Look for an anxiety disorder in childhood.
1967-infusion of 0.5mol/l lactate precipitates panic attacks in some patients. Infusion of lactate precipitates panic attacks in Panic Disorder patients, but not in normal controls. Breathing carbon dioxide precipitates panic attacks at similar rates.

Hypersensitivity of the “suffocation alarm system” to elevated carbon dioxide levels in these patients.

*Biological Aspects*
PET studies show right parahippocampal abnormalities in this population. Asymmetry in blood flow, blood volume and oxygen metabolism in the right parahippocampus.
Noradrenaline, serotonin, and GABA have all been implicated. Serotonin reuptake inhibitors are effective antipanic agents. Serotonin agonists may exacerbate panic. Nocturnal Melatonin is increased in Panic Disorder and stabilises with effective treatment. 5HT is the precursor of melatonin.
Benzodiazepines decrease the frequency of panic attacks, but need to be given in “relatively high doses”. Work quickly, often within a week. Risk of dependency is high. Issues with tolerance. Relapse on discontinuation is over 90%.

Overall: not the best.

*Medication Treatment*
Antidepressants- Studies show Imipramine, Phenelzine and Clomipramine to be effective. SSRi’s are effective.

“biphasic” antidepressant response- symptoms may worsen over the first week of treatment. Antidepressant effect may have later onset than in depression, so wait.
Exposure work is the single most important aspect of treating Agoraphobia or secondary Simple Phobia. Breathing exercises help to manage the hyperventilation associated with the panic attacks. Cognitive therapy is effective. Abnormal attributions are often assigned to the physiological arousal associated with the panic state and cognitive work can help reframe this. CBT, PCT (Panic Control Treatment).
Graduated in vivo exposure. 
Situational in vivo exposure. 
Adding relaxation training and breathing retraining have not been shown to add effect but probably make the patient feel better and more in control. 
Adding Cognitive skills does improve outcome. 
Slower and more graduated exposure has lower dropout rates and lower relapse rates. Massed ungraded exposure might have better outcome at 5y. 
Spouse aided helps. 
Adding communication skills may help.
Bibliotherapy versus Computer aided therapy versus Therapist aided therapy.
Telephone administered self exposure.

Relaxation therapy alone not so good.
6-10 y after treatment 30% are “well”, 40-50% improved but symptomatic, 20-30% same or worse (naturalistic study). In CBT treatment studies rates are better, about 75% are well after CBT (of those who complete treatment), about one third relapse over next 2-7yy.