For people with chronic illness, a combination of many factors may be causing clinical depression.

These may include:

- *Imbalance of brain neurotransmitters* Changes in these brain chemicals may cause or contribute to clinical depression.
- *Physical illness:* may cause a **concurrent (co-occurring)** depression for a variety of reasons. Medical conditions that have been implicated as triggering depressive symptoms include: endocrine conditions (hypothyroidism, etc.), neurological disorders such as brain tumours, encephalitis, epilepsy, diseases that cause structural damage to the brain, viral and bacterial infections, inflammatory conditions such as rheumatoid arthritis and lupus, vitamin deficiencies (especially vitamin B12, vitamin C, folic acid and niacin), heart disease, stroke, diabetes, kidney disease, multiple sclerosis, cancer.
 - Negative thinking patterns -

A pessimistic outlook, or habitual low self-esteem, a tendency to worry excessively, or a feeling of having little control over life events may make the development of clinical depression more likely.

- Family history of depression -

A history of a close relative with clinical depression can increase one's risk for developing the illness, although of course it also occurs in many people who have had no family members with depression.

- Difficult life events -

Events such as the death of a loved one or some other significant loss, divorce or relationship difficulties, financial strains, traumatic events, moving house/area can contribute to the onset of clinical depression.

- Medications -

Some medication can actually cause clinical depression. Therefore, it is important to inform doctors of <u>all</u> medications being taken and report any depressive symptoms. A Canadian study in 2001 looked at 2,500 subjects and found that most medications were not associated with major depression: these included beta-blockers, angiotensin-converting enzyme (ACE) inhibitors, lipid-lowering agents, digoxin, and diuretics. Calcium channel blockers were significantly associated with major depression, but only in young subjects, who tended to be seriously ill and taking multiple medications. *Opiate analgesics* (morphine and related drugs) were associated with major depression, but only in male subjects. Cortico *steroids*

were significantly associated with major depression. (

[1]

-) A list of prescription drugs with known depressive side-effects include: cardiac drugs and hypertensives (blood pressure tablets), sedatives, steroids, stimulants, antibiotics, antifungal drugs and analgesics (painkillers) (see list below)
 - Alcohol consumption -

Alcohol is quite often used as a way of coping with the stresses of chronic illness; however, alcohol is in fact a *depressant* and it can contribute to or even precipitate depression. Excessive alcohol consumption may be also a sign of depression. The following quote from the popular cartoon, The Simpsons involves a conversation between Homer Simpson, his work colleague, Lenny and Moe the bartender, which neatly demonstrates the problem with alcohol:

Homer: " Moe, what do you recommend for severe depression? "

Moe: "Booze, booze and more booze."

Lenny: " There's nothing like a depressant to cure depression. "

(And alcohol is nothing like a cure for depression!)

Drugs that may precipitate depression:

- Alcohol
- Cortisone-like steroids
- Oral contraceptives
- Cycloserine
- Pentazocine
- Amphetamines
- Digitalis (toxicity)
- Some phenothiazines
- Some antineoplastic (anticancer) drugs
- Disulfiram
- Physostigmine
- Oestrogen
- Prazosin
- Benzodiazepines
- Guanethidine
- Progesterone

- Haloperidol
- Reserpine
- Beta-blockers
- Hydralazine
- Indapamide
- Succinimide
- Carbamazepine
- Indomethacin
- Chloral hydrate
- Levodopa
- Sulphonamides
- Clonidine
- Methyldopa
- Cocaine
- Opiates

DEPRESSION AND CHRONIC ILLNESS:

Lawrence et al ([2]) conducted a primary care study which showed results that correlated with those of the Medical Outcomes Study ([3]) which measured health-related quality of life in patients with the chronic medical conditions of diabetes, hypertension, angina, myocardial infarction, congestive heart failure, chronic lung problems, gastrointestinal problems, back problems, and arthritis.

Lawrence et al ([2]) conducted a primary care study which showed results that correlated with those of the Medical Outcomes Study ([3]) which measured health-related quality of life in patients with the chronic medical conditions of diabetes, hypertension, angina, myocardial infarction, congestive heart failure, chronic lung problems, gastrointestinal problems, back problems, and arthritis.

Those patients who also had depressive symptoms or a diagnosis of depressive disorder reported more often three characteristics: low perceived health, increased pain, and more disability in terms of days in bed, which were more closely associated with anxiety and depression symptoms than medical diagnoses or severity of illness as reported by health care providers.

Lawrence's study showed that certain medical diagnoses (headache, osteoarthritis, abdominal pain, and diabetes mellitus) were associated with anxiety and depression.

However, they were not statistically significant indicators of anxiety and depression. Three of the four individual diagnoses that predicted anxiety and depression symptoms (headache, abdominal pain, and osteoarthritis) in the study are painful conditions that are frequently diagnosed by primary care clinicians

Female gender is widely accepted as a risk factor for anxiety and depression.

Chronic pain symptoms are often confused with symptoms of depression, and some researchers suggest that pain is the best indicator of depression in certain populations, such as the elderly.

[1] Patten SB, Lavorato DH. *Compr Psychiatry 2001 Mar-Apr; 42(2): 124-31* Medication use and major depressive syndrome in a community population.

[2]

Lawrence et al.

J Am Board Fam Pract

15(5): 183-190, 2002 Anxiety and Depression Symptoms in Primary Care Patients

[3] Stewart AL, Greenfield S, Hays RD et al, *JAMA* 1987; 262: 907-13 Functional Status and well-being of patients with chronic conditions: results from the Medical Outcomes Study